

Process Evaluation of the Residential Program



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Table of Contents

Executive Summary.....	4
1. Introduction	9
1.1 Residential Program Description.....	10
2. Methodology.....	13
3. Program Operations Findings	18
3.1 Summarizing Program Operations	18
3.1.1 Program Operations Prior to 2018	18
3.1.2 Program Restructuring	18
3.1.3 Cross Program Participation	21
3.2 Coordination with NEEA and the Utilities	23
3.2.1 Relationships with Energy Trust	23
3.2.2 Delineation of Roles and Responsibilities.....	24
3.2.3 Effectiveness of Gas Program Activities	25
3.2.4 Conservation Advisory Council	25
3.2.5 Challenges with Program Operations	26
3.2.6 Barriers to Program Participation.....	26
3.3 Feedback from NEEA.....	27
3.4 Role of Trade Allies.....	27
3.4.1 Instant Incentives	28
3.5 Manufactured Homes	29
3.6 New Construction	30
3.6.1 Feedback from Home Builders	31
3.6.2 Feedback from Home Verifiers.....	31
3.7 Retail Products Program	31
3.7.1 Findings from the Literature Review	32
3.7.2 Findings from the In-Depth Interviews.....	32
3.8 Assess Satisfaction with Energy Trust's Residential Program	34
3.9 Assessment of Program Processes.....	36
3.9.1 Budgeting.....	36
3.9.2 Code Changes	36
3.9.3 Forecasts.....	37
3.9.4 Measure Development Process.....	37
3.9.5 Developing Pilot Programs	38
3.9.6 Fixed Price Promotions	38
3.10 Impacts of COVID on Program Operations.....	40
3.10.1 Findings from the Literature Review	40
3.10.2 Findings from In-Depth Interviews	41
3.11 Wildfire Response	43
3.11.1 Literature Review Findings	43
3.11.2 Findings from In-Depth Interviews	44
4. Documenting Marketing and Relationship Activities Findings	46
4.1 Communications	46
4.2 Marketing Activities	48
4.2.1 Marketing Activities After the Restructuring.....	48
4.2.2 Alignment with Marketing Activities from Energy Trust	49
4.3 Effectiveness of New Outreach Strategies to Community Organizations	50
4.3.1 Outreach to Community-Based Organizations	50
4.3.2 Feedback from Utility Staff.....	51
4.3.3 Feedback from Community-Based Organizations	51
5. Identifying Gaps in Program Delivery	53
5.1 Problems with Contractor Application Processing and Invoicing	53

5.1.1	Literature Review Findings	53
5.1.2	Findings from In-Depth Interviews	54
5.2	Challenges in Serving Customers	56
5.3	Challenges with SW Washington Programs	57
5.4	Website Issues.....	58
5.4.1	Website Updates Post-Evaluation	58
5.5	Areas for Program Improvement	59
5.5.1	Improving Current Measure Offers	59
5.5.2	Community Outreach and Engagement	59
5.5.3	Contractor Support.....	60
5.6	Assessing Future Program Solutions	61
5.6.1	Incorporate Non-Energy Benefits in MADs	61
5.6.2	Expand Electric Program Measures.....	61
6.	Conclusions and Recommendations.....	62
6.1	Research Objective #1: Summarizing Program Operations	62
6.2	Research Objective #2: Documenting Marketing and Relationship Activities	63
6.3	Research Objective #3: Identifying Gaps in Program Delivery.....	64
6.4	Research Objective #4: Assessing Future Program Solutions.....	65
6.5	Recommendations	66

Appendices (Bound Separately)

- A. Staff Interview/PMC/PDC Interview Guide
- B. Electric Utility Interview Guide
- C. Natural Gas Utility Interview Guide
- D. NEEA Interview Guide
- E. Existing Homes Contractor Interview Guide
- F. Manufactured Home Retailers Interview Guide
- G. Manufactured Home Trade Allies Interview Guide
- H. New Home Construction Builders Interview Guide
- I. New Construction Verifiers Interview Guide
- J. Distributors Interview Guide
- K. Community Partners Interview Guide
- L. Contractor Demographic Analysis

Table of Figures

Figure 1: Energy Trust's Service Territory by Utility	9
Figure 2: Energy Trust's New Residential Program Structure.....	19
Figure 3: Energy Trust's Residential Program's Relationships with its Program Partners	20
Figure 4: Residential Program Application Processing Activity 2019-2021	53

Table of Tables

Table 1: Summary of Data Collection Activities by Research Objectives.....	15
Table 2: Summary of Market Actor Interviews Across Respondent Groups	16
Table 3: Summary of Topic Areas Addressed in the In-Depth Interviews	17
Table 4: Summary of Satisfaction Ratings for Energy Trust Overall Across Market Actors	34
Table 5: Summary of Satisfaction Ratings for Energy Trust Staff Overall Across Market Actors	35
Table 6: Summary of Market Actor Satisfaction Ratings	35
Table 7: Percentage of Applications by Quarter Within and Outside of SLA Parameters	54

Executive Summary

Energy Trust of Oregon (Energy Trust) is an independent nonprofit organization, selected and overseen by the Oregon Public Utility Commission. It offers services to Oregon customers of Portland General Electric (PGE), Pacific Power, NW Natural, Cascade Natural Gas and Avista, and SW Washington customers of NW Natural. Energy Trust also works with Clark Public Utilities in SW Washington to share costs and savings for dual fuel measures.

Energy Trust's Residential program provides electric and gas energy-efficiency solutions for residential customers in existing and newly constructed single-family and manufactured homes in Oregon. The program also supports gas energy efficiency in existing and newly constructed single-family and manufactured homes and existing small multifamily properties (2-4 units) in Southwest Washington.

The program is managed by a Program Management Contractor (PMC), CLEARResult, which is responsible for management of program operations, development and implementation of offerings, forecasting, marketing, outreach, and customer service. The program also contracts with TRC for program delivery services related to new single-family residential construction, and with CLEARResult for program delivery services that support retail promotions. These Program Delivery Contractors (PDCs) provide targeted, market-focused residential offerings and have smaller contracts focused solely on program implementation, not program management.

Energy Trust of Oregon contracted with Johnson Consulting Group to complete a process evaluation of its Residential program to assess the overall changes in program operations from 2018-2021. This process evaluation documents changes in the program from 2018 through 2021. Concurrent with the program evaluation interviews, Energy Trust staff continue to make refinements and improvements. These changes will be highlighted as appropriate throughout this report.

The Residential program was restructured and reorganized in 2018 and this process evaluation explored the following research objectives:

- Research Objective #1: Summarizing Program Operations;
- Research Objective #2: Documenting Marketing and Relationship Activities;
- Research Objective #3: Identifying Gaps in Program Delivery; and
- Research Objective #4: Assessing Future Program Solutions.

Overall, the Johnson Consulting Group team completed in-depth interviews with 104 respondents:

- 31 in-depth interviews with Residential program staff in either a single or group setting;
- 11 in-depth interviews with utility staff in either a single or group setting;
- Two interviews with NEEA program staff in a group setting; and
- 60 individual in-depth interviews with participating contractors, retailers, distributors, builders, verifiers, and staff from Community-Based Organizations (CBOs).

Conclusions

Overall Conclusion

- **Energy Trust's Residential program continues to adapt and evolve in a changing market.** Specifically, the Energy Trust staff were able to develop new program offerings and strategies to assist residential customers during the COVID-19 pandemic and the wildfires. The interviews with the 123 respondents clearly indicated that although some Energy Trust program offerings missed

the mark, the Residential program staff remain committed to developing viable program solutions for the customers they serve throughout Oregon and Southwest Washington. The key findings and recommendations from this process evaluation are summarized next. Section 6: Conclusions and Recommendations provides additional details regarding these research objectives.

1. Research Objective #1: Summarizing Program Operations

- ***The organizational restructuring created some opportunities for economies of scale, but also highlighted the siloed decision-making that still exists within Energy Trust.***

Energy Trust Residential program staff have developed productive relationships with the electric utilities and NEEA program staff. However, some gas utility staff believe that the incentive structure is too low for these to promote gas measures which further limit the participation of their customers.

Market Actor Satisfaction

- ***Overall, the market actors working with Energy Trust reported relatively high levels of satisfaction for both the Residential program and the Energy Trust staff.***

Impact of COVID

- ***Energy Trust staff worked proactively to limit the impacts of COVID-19 on program operations by providing Personal Protective Equipment (PPE) to trade allies and developed bonus and incentive offers to support the building trades.*** But Energy Trust could not develop an effective approach to adapt to the increased cost of materials thus limiting the effectiveness of its Fixed Price Promotions (FPP).
- ***Some trade allies felt more disconnected from Energy Trust when the meetings switched from in-person to virtual discussions.***

Impact of Wildfires

- ***Energy Trust staff developed a creative solution to encourage home rebuilding after the wildfires.***

2. Research Objective #2: Documenting Marketing and Relationship Activities

Communications

- ***Perception is not always reality.*** Feedback from the market actors suggested they did not always have a full understanding of the Energy Trust's staff's motives or intentions. This lack of understanding led to negative feedback regarding some staff interactions.
- ***Internally, Energy Trust staff remarked on the low level of communication regarding the development of new offers that could apply to multifamily and solar residential segments.*** This miscommunication has led to misunderstandings about program offerings and missed opportunities.
- ***The CBOs and contractors were frustrated about the lack of notification when offers from Energy Trust are no longer applicable.*** Both respondent groups received negative feedback from these potential customers, with the CBOs receiving negative blow back from residents.
- ***The retailers, distributors, and manufacturers want to be more proactively engaged in long-term promotions.*** They could offer regional and national expertise that could directly benefit these energy efficient equipment promotions.

Marketing Activities

- **The Residential program staff coordinate their marketing and outreach activities with electric utility programs.** The program staff worked jointly on multiple campaigns and explore innovative dual marketing approaches. But sometimes these campaigns were confusing to customers as these distinctions are not well-defined.
- **Most market actors are aware of the Energy Trust materials.** However, most contractors are not aware of the Business Development Funds that are available to them.
- **Washington programs are often overlooked in developing comprehensive marketing approaches, as they are viewed as “add-ons” to the overall Energy Trust activities.**

Diversity, Equity, and Inclusion (DEI) Activities

- **Energy Trust has developed relationships with the CBOs.** However, most interactions focus on administrative issues rather than longer-term strategic planning.

3. Research Activity #3: Identifying Gaps in Program Delivery

Application Processing

- **Processing of rebate applications experienced the “perfect storm” of unanticipated volume from contractors coupled with shortages of trained PMC staff who could complete the applications properly.** These factors led to significant delays in processing the applications in a timely manner, which created significant financial hardships for many smaller contractors.

Challenges in Reaching DEI and Rural Communities

- **Despite Energy Trust and PMC recruitment efforts, there is still a lack of qualified minority contractors enrolled in these programs.**
- **Program constraints limit participation.** Many contractors reported that Energy Trust’s program offerings are too inflexible to meet rural customers’ needs. Therefore, these customers are not able to participate in the Energy Trust program, regardless of the incentive amount available.
- **Lack of diversity in the marketing materials.** Few materials are translated into Spanish, despite the large concentrations of residents who do not speak English as a first language.

Website Concerns

- **The current website is difficult for contractors and customers to navigate, as it is not designed to provide information about all the Residential program offerings.**
- After this process evaluation, the Residential website has been modified and updated to address many concerns raised by internal staff.

Challenges with the Retailers Program

- **Energy Trust staff are not actively involved with retailers in the New Manufactured Homes Program and with the various retail Fixed Price Promotions (FPPs).**

4. Research Objective #4: Assessing Future Program Solutions.

Improving Current Measure Offers

- **Align the Energy Trust offers to better serve underserved utility customers.** Energy Trust needs to develop more flexible program offers that go beyond simple incentive programs for energy efficiency improvements.
- **Consider expanding the list of available gas measures, especially in rural and DEI-focused communities, to include energy efficient gas furnaces.** Staff from several gas utilities believe significant energy savings opportunities still exist, especially in low- and moderate-income households.

Community Outreach and Engagement

- **Energy Trust staff should work proactively to engage directly with the leaders in the CBOs on a regular basis, rather than outsourcing communications to the PMC.** The relationships with the CBOs should be viewed as strategic partnerships that involve the highest level of interaction with Energy Trust staff.

Contractor Support

- **Develop a new and improved online portal for contractors.** Program staff suggested developing a simpler self-service option that would provide status updates of submitted projects.
- **Offer more contractor training opportunities in-person and in locations outside of the Portland metropolitan area.** Both contractors and verifiers requested more training opportunities with Energy Trust staff.

New Approaches

- **Incorporate Non-Energy Benefits in the Measure Approval Document (MAD) process.** Residential program staff believes that certain measures, such as air conditioners, may lead to significant health improvements for those individuals suffering from severe medical conditions, such as Multiple Sclerosis.
- **Expand the suite of electric measures to include** promoting heat pumps and integrating Demand Response programs that include water heaters with smart water heater controls.
- **Consider additional new technologies** that are currently available in the market including dehumidifiers and EV chargers in future program offerings.

Recommendations

- **Recommendation #1. Energy Trust Residential program staff should reengage with the market actors across all segments to address ongoing concerns and provide timely and updated communication pathways with these groups.** Ultimately, the program success depends upon interactions with Residential program staff. As the process evaluation revealed, many market actors do not have full understanding of Energy Trust's intentions, which suggests that Energy Trust needs to engage more proactively with these critical groups.
 - Develop and test an online portal for contractors to submit program applications, that also provides transparency into the status of these applications.
 - Standardize the application submission process to online rather than the current approach which allows a mix of paper or online applications, depending upon the program offering.
 - Proactively reach out to market segment experts including utility staff, manufacturers, retailers, and distributors to provide guidance and input into long-term program planning.

These subject-matter experts can provide additional insights and approaches that will help broaden the program's reach.

- Continue to recruit contractors located in rural and diverse communities, to ensure equitable distribution of Energy Trust programs. Increasing participation within the DEI communities could also help to strengthen overall program relationships with Energy Trust and provide more options to customers in these communities.
- ***Recommendation #2: Energy Trust staff should review its program offerings and investigate alternative approaches to better match the offerings to the communities it serves.***
- ***Recommendation #3: Energy Trust staff should look for ways to streamline program communications and delegate internal decision-making so programmatic adjustments can be made in a timely manner.***

Memo

To: Energy Trust Board of Directors

From: Marshall Johnson, Sr. Program Manager – Residential,
Sarah Castor, Evaluation & Engineering Manager

cc:

Date: August 23, 2022

Re: Staff Response to the Residential Program Process Evaluation

The Residential program process evaluation sought to document program processes, successes and challenges; describe the experiences of market actors and community organizations working with the program; and identify ways to improve the program going forward. Fielded in the second half of 2021, the report summarizes program staff's efforts to respond to the impacts of the initial year of COVID-19. During the pandemic, staff managed program offers to meet the needs of customers and trade allies during a period of uncertainty across most markets, including changes in how residential customers operate their homes, increased demand for home improvements, staffing challenges for the Program Management Contractor (PMC) and trade allies, and supply chain constraints.

The evaluation found there was strong program demand during the initial year of the pandemic and activity from incentive bonuses overwhelmed program incentive processing, leading to delays in incentive payments that caused tension among customers and trade allies. By late 2021, residential program incentive processing had returned to normal and outreach staff were actively working to strengthen relationships with impacted trade allies and reinforce improved processing timelines. Overall, market actors working with Energy Trust reported high levels of satisfaction with the Residential program and Energy Trust staff.

While the report indicated that electric utilities find coordination with the Residential program to be effective, gas utilities expressed frustration with limited incentives and availability of gas efficiency measures and a desire for additional coordination. Energy Trust is implementing a new approach to incorporate utility input into its annual program planning process to identify savings opportunities and has engaged gas utility partners to improve marketing coordination and proactively identify cooperative marketing strategies.

Overall, Residential program staff feel the restructuring of the program in 2018 has helped manage limited internal staff resources. This has allowed the program to meet annual savings goals, prioritize support for customers Energy Trust has not effectively served in the past, and research new technologies and approaches to balance the savings portfolio as lighting savings have diminished. While alignment of single-family and multifamily offers continues to be challenging and resource-intensive, several Residential program offers—such as fixed price promotions, incentives for rental properties, retail offers and smart thermostats—have been improved by cross-program coordination. Energy Trust is currently exploring the development of a new team to support work that crosses programs and sectors to increase coordination. Staff also maintain monthly internal coordination forums between Residential and Commercial program staff. Energy Trust may also explore the benefits of serving small multifamily properties (2-4 units per building) through the Residential program.

Energy Trust is committed to regularly assessing the effectiveness and reach of its programs. Customer and partner insights are collected through Fast Feedback surveys of participants, outreach to community organizations, interactions with trade allies through field visits and annual forums, and additional market research. Staff continually monitor application trends and program activity to manage program offerings.

As a result of this evaluation, the Residential program plans to focus on:

- Seeking additional feedback from community organizations on program offerings and relationship management
- Improving online and paper forms to meet the needs of customers and trade allies
- Continuously monitoring and optimizing the online user experience
- Developing offers that meet the needs of rural customers and contractors
- Identifying strategies to better satisfy the needs of underserved audiences, including development of contractor capacity and working with minority- and women-owned businesses and service-disabled veteran-owned businesses as defined by the state's Certification Office for Business Inclusion and Diversity (COBID)

In 2022, the Residential program managed a competitive solicitation and request for proposals to deliver the program through three distinct contracts—Home Retrofit, EPS New Construction, and Midstream & Online—in alignment with the program structure in 2018. The solicitation emphasized the importance of supplier diversity and required at least 20% of the contract budget be delivered by COBID-certified companies. The Energy Trust Board of Directors will review the staff recommendations for contractor selection at its September 7, 2022 meeting.

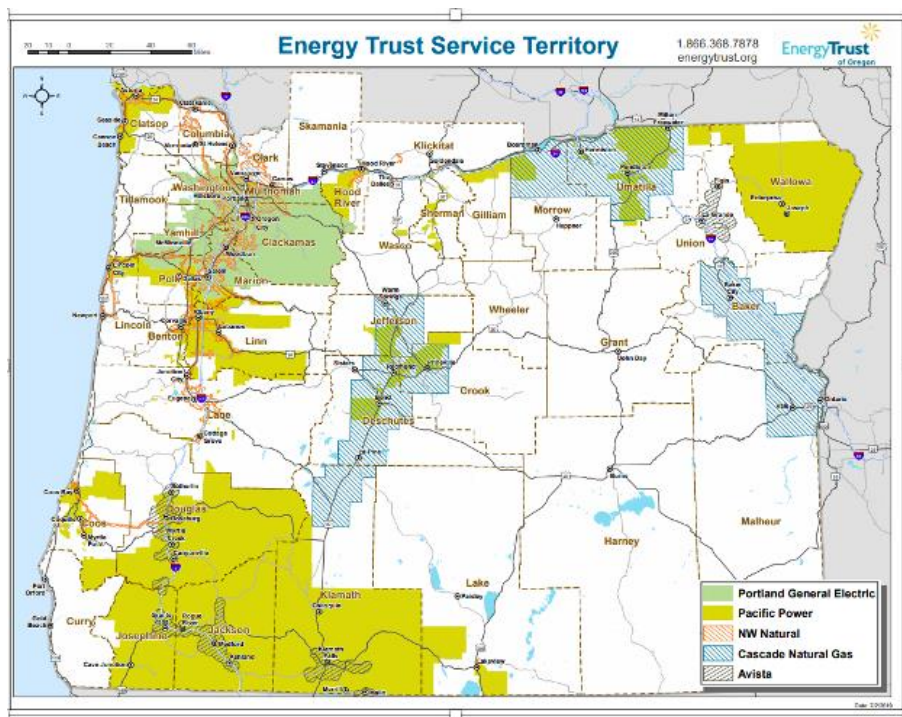
1. Introduction

Energy Trust of Oregon (Energy Trust) is an independent nonprofit organization, selected and overseen by the Oregon Public Utility Commission. It offers services to Oregon customers of Portland General Electric (PGE), Pacific Power, NW Natural, Cascade Natural Gas and Avista, and SW Washington customers of NW Natural. Energy Trust also works with Clark Public Utilities in SW Washington to share costs and savings for dual fuel measures.

Energy Trust’s Residential program provides electric and gas energy-efficiency solutions for residential customers in existing and newly constructed single-family and manufactured homes in Oregon. In Southwest Washington, the program also supports gas energy efficiency in existing and newly constructed single-family and manufactured homes and existing small multifamily (2-4 units) for customers of NW Natural.

The program is managed by a Program Management Contractor (PMC), CLEAResult, which is responsible for management of program operations, development and implementation of offerings, forecasting, marketing, outreach, and customer service. Energy Trust also contracts with TRC for program delivery services related to new single-family residential construction, and with CLEAResult for program delivery services that support retail promotions. These Program Delivery Contractors (PDCs) provide targeted, market-focused residential offerings and have smaller contracts focused solely on program implementation, not program management.

The following map illustrates Energy Trust’s Residential Program’s service territory across Oregon and Southwest Washington.



Source: 2021 Program Implementation Manual, p. 4.
Figure 1: Energy Trust's Service Territory by Utility

Energy Trust contracted with Johnson Consulting Group to complete a process evaluation of its Residential program to assess the overall changes in program operations from 2018-2021. The Residential program was restructured and reorganized in 2018. Prior to 2018, Energy Trust’s residential sector was divided into three separate programs: Existing Homes, New Homes, and Home Products. Each program had its own PMC. In 2018, the Residential Program transitioned to a single program portfolio, managed by one PMC and two PDCs. Internally, the Residential Program staff reorganized into three groups: Operations Fulfillment (Operations), Customer Acquisition, and New Opportunities and Development.

In addition, Energy Trust has developed organizational goals regarding reaching low-income and under-served populations and has developed an outreach initiative to Community-Based Organizations (CBOs), which coordinates residential program activities targeting these market groups.

This process evaluation was designed to document the overall effectiveness of program operations from the restructuring and focused on the following critical research objectives:

- Research Objective #1: Summarizing Program Operations which includes documenting program activities and staff responses to COVID-19 and the natural disasters that affected parts of Energy Trust’s service territories in recent years;
- Research Objective #2: Documenting Outreach and Relationship Activities which includes analyzing how Energy Trust staff are working with program funders, local communities, trade allies and customer groups Energy Trust has not served in the past;
- Research Objective #3: Identifying Gaps in Program Delivery and if the current reporting and tracking strategies are effective in the new organizational structure; and
- Research Objective #4: Assessing Future Program Solutions especially emerging technologies and additional offerings that Energy Trust should consider moving forward (see Section 5.6).

Overall, the Johnson Consulting Group team completed the in-depth interviews with 104 respondents:

- In-depth interviews with 31 Residential program staff in either a single or group setting;
- In-depth interviews with 11 utility staff in either a single or group setting;
- Group interview with two NEEA program staff; and
- Individual in-depth interviews with 60 participating contractors, retailers, distributors, builders, verifiers, and staff from CBOs.

1.1 Residential Program Description

Energy Trust’s residential sector provides electric and gas energy-efficiency solutions for residential customers of single-family homes, manufactured homes, and newly constructed homes. Incentives are available for energy-efficient HVAC and water heating equipment, lighting, appliances, and weatherization upgrades. The program delivers these efficiency services through several key market channels:

- **Home retrofit** – Residential customers can receive standard incentives for heating and cooling systems, controls, fireplaces, insulation, windows, water heating (WA), and thermostats (available through instant coupon, PGE marketplace and direct ship) after completing an incentive application. Trade ally contractors perform most project installations. Energy Trust’s Home retrofit track also works with Energy Trust’s Existing Multifamily program to help renters save energy and increase home comfort through the installation of cost-effective weatherization and mechanical system improvements.

- **Retail and distribution** – Retail incentives are paid to retailers and passed on to consumers as instant discounts on lighting, showerheads, smart thermostats, certain clothes washers and clothes dryers, and water heaters at point of purchase. Distributor incentives are paid to distributors to encourage the stocking and sales of energy-saving equipment, such as fireplaces with electronic ignitions and qualified high efficiency water heaters. Participating distributors may provide “instant discounts” to installers for purchasing qualifying gas and electric water heaters.
- **EPS new construction** – Energy Trust works with builders and verifiers to increase the energy-efficiency of newly constructed homes through incentives, education, trade and program ally support, and quality assurance.
- **Manufactured homes** – Energy Trust offers incentives and no-cost upgrades to residents of existing manufactured homes for HVAC, home energy reviews and weatherization upgrades. Additionally, higher incentives are available for qualifying heat pumps and ductless heat pumps installations through participating trade allies through the Manufactured Homes Heat Pump Fixed Price Promotion (FPP). Additionally, incentives, support, education materials and collateral are available for new manufactured home retailers, customers and manufacturers for the sale, purchase, and sighting of ENERGY STAR® and NEEM+ Certified homes and efficient heat pump and water heating equipment.¹

Additional Energy Trust program offerings which include the residential market are described next.

During the past three years, Energy Trust expanded the incentive levels and eligibility for **Savings Within Reach** (SWR) offers, which offer higher incentives for income-qualified customers or those customers receiving unemployment benefits or other financial assistance as the result of the pandemic. The minimum and maximum guidelines refreshed annually to align with Federal Poverty Guidelines and Oregon state medium income levels². Low-income customers can qualify if their annual incomes are below the minimum threshold Or low and moderate-income customers may qualify if below the maximum income thresholds, and may be eligible to finance their projects through [On-Bill Repayment](#). Customers receive SWR incentives as a discount on their contractor project invoice, and Energy Trust reimburses contractor for incentivized projects, minimizing out of pocket costs for these customers. Energy Trust also offered a gas furnace bonus for Savings Within Reach customers to support emergency replacements.³

Community Partner Funding Pathway: Energy Trust increased incentives offered through community partnerships to better serve communities of color, low- and moderate-income customers and rural areas. These relationships involve co- creating focused offers and initiatives with community-based organizations (CBOs) and other agencies embedded in these communities. Examples of eligible community partners include CBOs, community action agencies, and municipalities such as housing authorities and economic development districts. Customers served are asked to complete an optional demographic survey to indicate their income levels, race/ethnicity, etc. The only Community Partner Funding measure that requires the customer to meet a specific income range is the gas furnace measure (must meet at least SWR levels).⁴

¹ “CLEAResult, 2021. “2021 Program Implementation Manual,” September, pp. 5-6.

² <https://www.energytrust.org/incentives/savings-within-reach/#tab-two>

³ Energy Trust of Oregon, 2021. “2020 Annual Report to the Oregon Public Utility Commission & Energy Trust Board of Directors, April 15, Updated November 22.

<https://energytrust.org/wp-content/uploads/2021/04/2020.Energy-Trust-Annual-Report.pdf> pp. 20-22; <<Accessed 2-2-2022>>

⁴ <https://insider.energytrust.org/programs/home-retrofit/community-partner-funding/>

Manufactured Home Replacement: This program was initially offered as a limited-scale demonstration project from 2017 to 2021. It then relaunched the offer as an ongoing component of the Residential program portfolio in Q1 2022. The Energy Trust provides incentives to support customer’s replacing their manufactured home. Serves owners of manufactured homes built before 1995 and household income meets [Savings Within Reach](#) qualifications or home is in community with affordability guidelines. The offer provides financial and technical assistance to owners of older manufactured homes who are seeking to replace their home with a newly built, energy- efficient home. Customers include households impacted by wildfires and other state-declared disaster events.⁵

Manufactured Home No-Cost Services: This program offering was launched in 2007 and subsequently redesigned in 2021. [Free duct sealing and duct repairs](#) are available for qualified existing manufactured homeowners or renters. The program strives to focus on homes built prior to 1995 and with no history of weatherization repairs. Energy Trust staff pre-approve every home through a brief customer interview during which home age, heating system, and site usage history is checked. Sites which are considered ‘good candidates’ (or which have a high likelihood of needing duct sealing or repair) are referred to participating trade allies. Approved trade allies then conduct diagnostic testing to ensure any duct sealing or repair would meet PTCS criteria before performing work. Diagnostic testing is combined with a complete Home Energy Assessment, which collects additional useful home details such as HVAC system type and age, water heating, thermostat, insulation, and other details which are reported to the program.⁶

⁵ <https://www.energytrust.org/residential/manufactured-home-replacement/>

⁶ <https://azureenergytrust.sharepoint.com/forms/Program%20Forms/Forms/Forms%20by%20Program.aspx?id=%2Fforms%2FProgram%20Forms%2FXMH%5FFM0320T%2Epdf&parent=%2Fforms%2FProgram%20Forms>

2. Methodology

Our research activities focused on summarizing the changes that have occurred for each program component since the most recently completed process evaluations. This process evaluation explored the four critical research objectives (noted in Section 1) through multiple pathways including a literature review of the most recently completed process evaluations, annual and quarterly reports from the PMC (CLEARResult) and the PDC (TRC) for the New Construction Program, and a review of the current website and collateral materials available for customers and contractors to review.

The team completed a literature review which included reviewing the following sources:

Energy Trust Quarterly and Annual Reports to the Oregon Public Utility Commission

- *Energy Trust of Oregon, 2021. "2020 Annual Report to the Oregon Public Utility Commission & Energy Trust Board of Directors,"* April 15, Updated November 22, 2021.
- *Energy Trust of Oregon, 2021. "Quarter Two 2021 Report to the Oregon Public Utility Commission & Energy Trust Board of Directors,"* August 13.

Monthly and Annual Reports from Program Implementers

- CLEARResult, 2019. *"Energy Trust of Oregon Residential Annual Report-2018,"* February 28.
- CLEARResult, 2020. *"Energy Trust of Oregon Residential Annual Report-2019,"* February 28.
- CLEARResult, 2021. *"Energy Trust of Oregon, Residential Annual Report for PY2,"* March 1.
- CLEARResult, 2021. *"Energy Trust of Oregon Residential Q3 Report,"* October 15.
- CLEARResult, 2021. *"Residential PMC Monthly Report,"* November.
- TRC, 2020. *"Energy Trust of Oregon EPS New Construction 2020 Annual Report,"* February 22.

Diversity, Equity, and Inclusion (DEI) Reports

- CLEARResult, 2020. *"2020 Residential Diversity, Equity and Inclusion Implementation Plan,"* March.
- CLEARResult, 2021. *"2021 Residential Diversity, Equity and Inclusion Marketing Plan,"* May.
- CLEARResult, 2021. *"Energy Trust Residential PMC OR Marketing Plan 2021,"* December 11.
- CLEARResult, 2021. *"Energy Trust of Oregon-Residential Program Multicultural Marketing and PR Plan,"* June 3.

Evaluation, Measurement & Verification Reports

- Nexant, 2015. *"2015 Products Program Process Evaluation,"* November 4.
- Evergreen Economics, 2016. *"2014-2015 New Homes Process Evaluation,"* March 17.
- ILLUME Advising, 2016. *"Process Evaluation of Energy Trust's Existing Homes Program,"* December.

Special Memoranda

- CLEARResult, 2021. *"Manufactured Homes 2021 Update Memorandum,"* June.

Program Implementation Manual

- CLEARResult, 2021. *"Residential Program Implementation Manual,"* September.

Given the scope of the activities completed by Energy Trust and its implementation contractors, program funders, and market actors, the literature review findings are summarized by relevant topic area. This approach of combining the results reported by Energy Trust and its support staff provides additional context and meaning when compared to the responses from the participating market actors. This approach also illustrates that often the respondents are unaware of the progress that Energy Trust has made in addressing their concerns.

Overall, the Johnson Consulting Group team completed in-depth interviews with 123 respondents:

- In-depth interviews with 31 Residential program staff in either a single or group setting;
- In-depth interviews with 11 utility staff in either a single or group setting;
- Group interview with two NEEA program staff; and
- Individual in-depth interviews with 79 participating contractors, retailers, distributors, builders, verifiers, and staff from CBOs.

The specific breakdown of interviews follows.

- **Residential program staff** interviews with 20 Residential Energy Trust staff members and 11 staff members from the Residential PMC and PDC staff.
 - Energy Trust Residential Operations team;
 - Energy Trust Residential New Opportunities team;
 - Energy Trust Residential Customer Acquisition team;
 - Energy Trust Cross-program and Commercial program staff;
 - Energy Trust Communications and Customer Service (CCS) and Outreach staff;
 - Energy Trust Finance staff;
 - CLEAResult Retail PDC contract staff;
 - CLEAResult PMC staff; and
 - TRC New Homes PDC contract staff.
- **Program sponsor** interviews – Completed interviews with 11 staff members from the following organizations:
 - Individual in-depth interviews with utility staff from:
 - NW Natural;
 - Cascade Natural Gas;
 - Avista; and
 - Clark Public Utilities (which coordinates dual fuel program offerings with Energy Trust).
 - Group interviews with Utility and Energy Trust program and marketing staff from:
 - PGE; and
 - Pacific Power.
- **Interviews with NEEA program staff** regarding New Construction and Measure Development activities
- **Market-actor interviews including:**
 - *Trade ally contractors* who install measures for the Home Retrofit program;
 - *Retailers and distributors* who participate in the Retailer program;
 - *Home builders and verifiers* who participate in the EPS New Construction program;
 - *Manufactured home retailers*; and

- *Community-Based Organizations* who participate in Energy Trust’s Community Partner Funding Pathway and related DEI activities throughout Oregon.

Table 1 summarizes the research objectives that were addressed in these in-depth interviews by respondent group.

Table 1: Summary of Data Collection Activities by Research Objectives

Research Objective	Program Data Collection Activity	
	In-Depth Staff Interviews	Trade Ally Interviews
Summarizing Program Operations	Focus on Energy Trust's responses and programmatic changes due to the organizational restructuring and realignment, current effectiveness of program operations, including cross-program coordination, and Energy Trust’s responses to COVID-19 and natural disasters in 2020-2021.	Assess satisfaction with Energy Trust's Residential Program and its components.
Documenting Outreach and Relationship Activities	Assess the effectiveness of new outreach strategies to CBOs, minority customers, those in rural areas and historically under-served customer groups. Describe the collaboration between Energy Trust, its program funders, and other stakeholders, including NEEA and Clark Public Utilities.	Identify the distributor/installer benefits from the midstream offering. Assess the effectiveness Energy Trust's marketing and outreach activities and how that drives lead generation, and the effectiveness of outreach to minority and woman-owned businesses.
Identifying Gaps in Program Delivery	Document current gaps in program delivery to customers across all residential market sectors, coordination with other Energy Trust programs, and delays in program tracking or application processing.	Detect perceived gaps in Energy Trust's program delivery and support activities to trade allies, and suggested areas for program improvement.
Assessing Future Program Solutions	Identify new and emerging technologies, or additional dual fuel measures that Energy Trust should consider in future program offerings.	Describe technologies that trade allies want to promote in future program years.

The following table summarizes the number of interviews completed by respondent group in Oregon and Washington. These trade allies and retailers/distributors were recruited and interviewed for this process evaluation as they represent a diverse group of business sizes, geographic locations, experience with different incentivized measures offered through the Residential program.

Table 2: Summary of Market Actor Interviews Across Respondent Groups

	Planned			Actual		
	OR	WA	Total	OR	WA	Total
Trade Ally Surveys						
Home Verifiers	4	1	5	5	1	6
Home Builders	12	3	15	7	0	7
Existing Homes (SF) (Retrofit)	35	5	40	32	4	36
Total	51	9	60	44	5	49
Retailer and Distributor Interviews						
Product Retailers	8	3	11	3	5	8
Distributors	6	2	8	6	2	8
New Manufactured Home Retailers	4	1	5	3	2	3*
Total	18	6	24	12	9	19
Community-Based Organizations						
Organizations	11	NA	11	10	NA	10
Staff Members	11	NA	11	11	NA	11**

*Two of the manufactured homes retailers sold homes in Washington as well as Oregon.

** One staff member participated in multiple programs.

Interview Guide Topics

The Johnson Consulting Group team developed specialized interview guides for each respondent group. Copies of these interview guides are in Appendices A-K. The interview guides explored the following topic areas with each respondent; however, the topics and subject matter varied by respondent. These interviews were largely open-ended which was designed to capture the greatest level of detail. A few questions for the market actor interviews were closed-ended, including assessing overall satisfaction, sales trends, and demographic information. Appendix L contains the sales and demographic information collected for the Existing Home contractor interviews; the satisfaction ratings are summarized in Section 3.8 of the Process Evaluation Findings.

Table 3: Summary of Topic Areas Addressed in the In-Depth Interviews

Program, Utility and NEEA Staff Interview Guides	Market Actor Interview Guides
Roles and Responsibilities	Roles and Responsibilities
Changes in Program Design/Delivery	Program Participation
Effectiveness of Program Operations	Effectiveness of Program Operations
Communication and Reporting	Communication and Reporting
Marketing and Outreach	Marketing and Outreach
Impact of COVID and Other Disasters	Impact of COVID and Other Disasters
Database Tracking	Application Processing
Effectiveness of Coordination with NEEA/Utilities	Sales Trends
Cross Program Participation	Cross Program Participation
Effectiveness of Coordination with Community Organizations	Market Actor Demographics
Role of Trade Allies	Satisfaction
Customer Interactions	Customer Interactions
Areas for Program Improvement/Enhancement	Areas for Program Improvement

Market Actor Recruitment

The Johnson Consulting Group worked with the Energy Trust Project Manager to develop a recruitment strategy to reach these market actors. First, we sent out introductory emails from the Project Manager introducing our firm and the purpose of our study and offering a \$50.00 Amazon e-gift card for completing an interview. All market actors were guaranteed that their feedback would remain anonymous unless they preferred otherwise.

We completed a total of 60 interviews with contractors, CBOs staff, and builders and verifiers and sent \$50.00 gift cards to 59 respondents, as one respondent declined the gift card.

However, the Johnson Consulting Group team also experienced some challenges in recruiting respondents in specific market groups. In particular, the contact list for the Manufactured Home Retailers was significantly out-of-date which made it difficult to reach our target sample. Furthermore, the interviews were conducted during the holiday season and many retailers were simply too busy to respond to our research request. Lastly, it was challenging to schedule interviews with participating builders and verifiers, due to their heavy workload associated with the rebuilding activities in the wake of the wildfires. We contacted all currently participating CBOs but reached 10 of the 11 organizations.

3 Program Operations Findings

This section summarizes the findings from the in-depth interviews with the internal Residential program staff, and Energy Trust staff who work in other Energy Trust areas, including the marketing, Multifamily and Solar programs, and administrative staff. These findings were supplemented with interviews with staff from the PMC and PDCS, and feedback from the market actors participating in Energy Trust's Residential program activities.

3.1 Summarizing Program Operations

3.1.1 Program Operations Prior to 2018

Until 2018, the Energy Trust organized its residential program offerings across specific market segments. The Energy Trust New Homes Program began in 2004 and focused on expanding the “market share of energy-efficient homes in Oregon by creating homebuyer demand and training homebuilders. In 2009, Energy Trust introduced the Energy Performance Score (EPS) which “measures the expected energy consumption of the home in millions of British thermal units per year (MBtu/year).” Energy Trust provided builders with incremental incentives tied to increased efficiency levels.⁷ In 2016, the EPS New Construction Program was expanded to include Southwest Washington and the program focused on recruiting and supporting participating builders and verifiers. NEEA also provides technical support to Energy Trust for this program, focusing on supporting code changes primarily in Washington.

Energy Trust also offered the Products Program which focused on providing midstream incentives to retailers, including manufactured homes retailers, and distributors. Until 2018, the bulk of the savings came from lighting and showerheads. Energy Trust also coordinated with retailer offerings to promote fuel measures with Clark Public Utilities.

The Existing Homes Program is the largest component of the Energy Trust's portfolio and delivers a broad range of energy-efficiency offerings to its customers with its five funding utilities: Avista, Portland General Electric (PGE), Pacific Power, NW Natural, and Cascade Natural Gas.⁸

3.1.2 Program Restructuring

When the PMC and PDC structure changed in 2018, Energy Trust's internal residential program staff also reorganized into three new groups: Operations Fulfillment (Operations), Customer Acquisition, and New Opportunities and Development.

The restructuring was designed to align Energy Trust's program operations with the resource potential and to prepare for upcoming market changes. Additionally, this restructuring was designed to minimize the overlap between the implementation contractors while leveraging the strengths of both the third-party implementation contractors and the internal Residential program staff. The goal was to allow for increased specialization and focus on Energy Trust's Residential resources, and increased coordination as defined in the PDC Collaboration Protocols.⁹ The restructuring also provided a performance management benefit when the three contractors coordinate their work scopes successfully to achieve the overall Residential program's goals. Another goal of the restructuring was to allow the Residential program staff to leverage their experiences as subject-matter experts, according to one internal staff member.

⁷ Evergreen Economics, 2016. “2014-2015 New Homes Program Process Evaluation,” March 17, p. 1.

⁸ ILLUME Advising, 2016. “Process Evaluation of Energy Trust's Existing Homes Program,” December, p. 3.

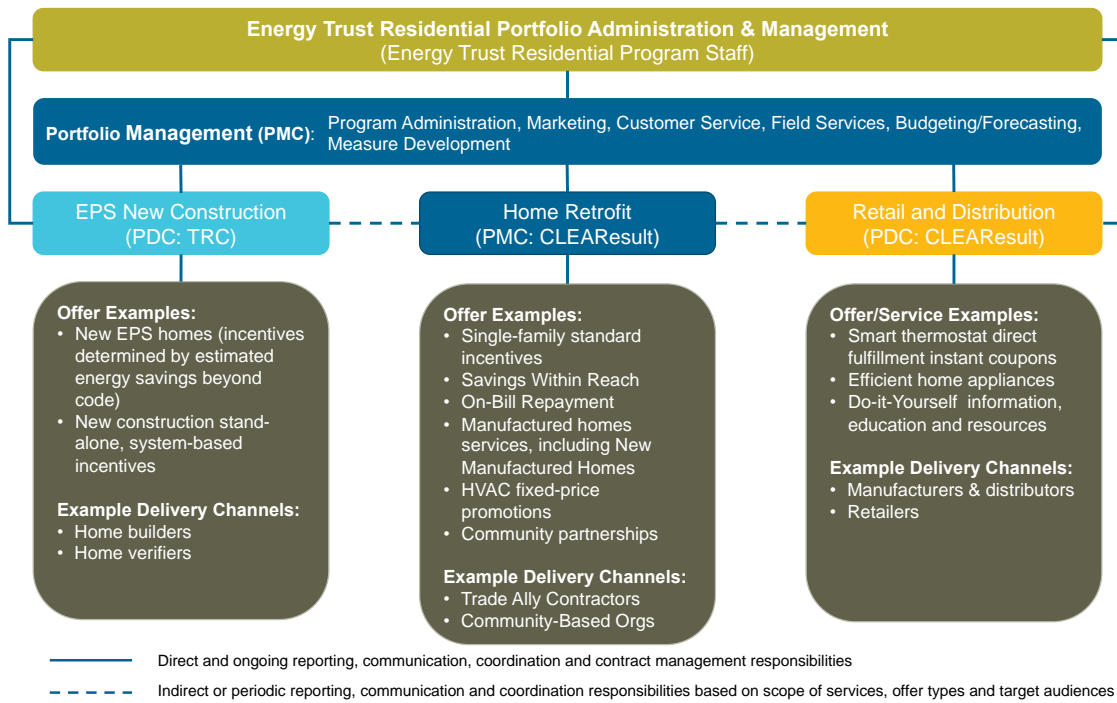
⁹ CLEAResult, 2021. “2021 Program Implementation Manual,” September, p. 6.

This process evaluation captured feedback on the effectiveness of the restructuring from multiple perspectives including Energy Trust’s current Residential program staff, Energy Trust staff who work on other program offerings, such as multifamily and solar offerings (i.e., Internal Staff), and staff who work for the PMC (CLEAResult) and the PDCs (CLEAResult and TRC) (i.e., External Staff).

Restructuring Energy Trust’s Residential program generated both positive and negative outcomes based on the feedback from the Energy Trust staff, implementers and market actors. On the positive side, the internal staff agreed that the new structure led to “good division of labor” that aligned with the natural strengths of the members of the new teams.

Figures 2 and 3 illustrate the new Residential organizational structure that has been put in place as part of this restructuring. Figure 2 illustrates the new ways in which the Residential program activities have reorganized, with the Marketing team taking a more proactive role across all program offerings. Figure 2 illustrates where the various topics covered in this process evaluations fall within the new organization.

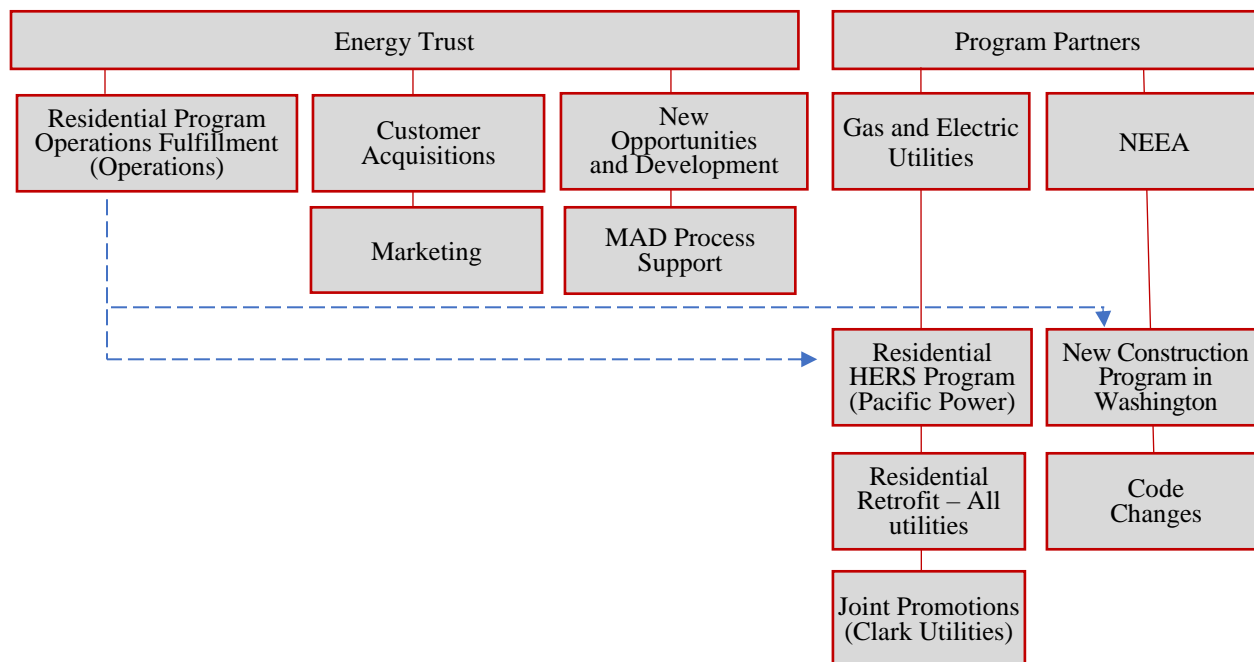
Figure 2: Energy Trust's New Residential Program Structure



Source: Energy Trust Staff, April 2022.

Figure 3 shows the inter-relationships between the Residential program activities with its program partners, including its program sponsors and co-program delivery partners. This figure helps to clarify the roles and responsibilities that the Residential program staff have with these other organizations and helped the evaluation team better understand ways in which the internal and external staff interact with these diverse market actors.

Figure 3: Energy Trust’s Residential Program’s Relationships with its Program Partners



According to the internal staff, this reorganization:

- **Allowed for Energy Trust staff to focus on strategy development and the PMC to operationalize these Energy Trust strategies.** The internal staff focused on more specialization within their jobs and concentration on specific market tactics. This new structure has also allowed the subject-matter experts to play a more active role in developing and deploying Energy Trust offerings.
- **Increased coordination and collaboration with the PMCs and their subcontractors in new ways.** While adjusting to the new structure did take some time, the staff commented that the program teams are working together and finding new ways to collaborate, such as coordinating across multiple market channels.

“And I felt comfortable that in implementing that transition (that) things didn't get more siloed. I think there's still been good collaboration between all of the three kinds of categories” (i.e., operations and management, customer acquisition and training, and new opportunities).
(PMC Staff).

Several staff members also believed the creation of different portfolios linked to specific contractors made it easier to set performance expectations.

- **Improved program database management.** The internal staff reported that having a lead program management resource that supported the overall process has allowed staff to develop economies of scale by developing consistent and standardized reporting and tracking formats.

“The PMC structure has really helped us because we’ve been able to offload a lot more upfront report development on them” (creating economies of scale.) (Internal Program Staff)

- **Improved deployment of staff resources.** The reorganization also allowed staff members to focus on specific areas. The New Opportunities and Development Group *“can spend more time focused on creating pilots (and) new energy savings opportunities that benefit all of the residential program and aren't distinguished by the products program or the new homes program or the retrofit program.”*
- **Improved deployment of PMC’s resources.** The senior staff explained that the new structure allowed the Energy Trust to shift resources within the Residential program more easily to where they are needed. This new structure also better capitalized on the subject matter expertise from the PDCs, for example in the EPS New Construction Program.

However, several internal Residential staff members identified several challenges from the reorganization that led to increased workload for both the Energy Trust and its implementation staff:

- **Having to establish new relationships and new offerings using new partners, such as CBOs and Southwest Washington home builders** as the restructuring expanded their roles and responsibilities. Several program staff are concerned about finding the right balance of engagement with resources in working with CBOs. Another challenge has finding PMC staff that have the experience to work with multiple market actors, such as new home builders, retailers, and CBOs, as these segments continue to expand in importance.
- **Climbing the “learning curve” with the PMCs on the contract side was also a challenge.** The new structure changed the relationships with the PMC and PDCs from competitors to colleagues, and it took some time to adapt to these new roles.
- **Increased level of reporting and bureaucracy as decisions now have to be discussed across a larger group of decision-makers with input from other Energy Trust staff in marketing and Multifamily or Solar operations.** These multiple stakeholders also weigh in on these programmatic decisions, which may delay the actual roll out of program offerings.

“There still are a lot of people involved in those groups and decision making is one of those things that can kind of lag behind a little bit...Who is the one to make the final call? Sometimes quick decisions are made, and then sometimes, there's just a lot of other stakeholders that they need to get in contact with to make those final decisions which can lead things to drag on.” (Internal Program Staff)

3.1.3 Cross Program Participation

The Residential program staff also had different perspectives regarding cross-program coordination as one respondent noted, *“it was in the eye of the beholder.”* Energy Trust staff members identified areas of successful program coordination, such as working with the solar program, which has ‘well integrated offers.’ However, cross-program coordination was more challenging with commercial programs, as that group is organized differently.

Multifamily Program

Program referrals are handled through a series of well-developed procedures.

“The PMCs do a pretty good job of making sure people get to the right place eventually. I think it's an inconvenience for the customer and to understand the nuances and the differences and what, why (of the different program offerings)?” (Internal Program Staff)

Staff also explained that while “generation and efficiency programs” work together, there are different opinions within Energy Trust regarding the direction of the multifamily and residential programs. Rather these programs are designed to maximize energy savings and be “customer focused.”

“We broke down the boundaries in residential so that we have authority and autonomy under the umbrella of residential to have maximum coordination.” (Internal Program Staff)

Delineation of Multifamily vs. Single Family Markets

But some internal debate and friction remains regarding program coordination of offers to both multifamily and single-family customers. As one Residential program staff member explained, “We made a choice 10 or so years ago to sort it the way that we did and we’re living with that (decision).”

“There’s coordination required and some of the actors aren’t involved in setting up the marketing... That’s where sometimes disconnects can come up if there isn’t pre-emptive work done on the front end to make sure everyone’s aware and lined up.” (Internal Program Staff)

However, staff from the multifamily program have a different perspective.

“...Because we have different definitions across the state around ‘small multi-family,’ we have different incentives that we can offer based on the measures. I think there can be improved coordination on offering the same incentive, understanding what budget is available, and making a plan.” (Internal Program Staff)

The program staff described a recent offer for a residential heat pump measure that would also be a viable offer for renters. However, renters account for 77% of the multifamily market, and the Multifamily program staff were concerned that “this would be a popular measure and the funding would run out quickly.”

“Historically, the approach has been to say this is only for single family homes. And so, there might be a promotion that’s just for single family, the unintended consequence of that is that we’re excluding multifamily customers that would otherwise maybe be eligible.” (Internal Program Staff)

Staff from the Residential and the Multifamily programs explained that previous attempts at coordinating Residential and Multifamily program offerings have not been successful.

“...because Multifamily customers end up being left out of opportunities like the Ductless Heat Pump and Rentals Promotion, which was originally designed only for single family rentals.” (Multifamily Program Staff)

The challenge of coordinating program offerings among the two market segments cropped up with a smart thermostat offering that was open to both residential and multifamily customers. However, the forecasted participation numbers were incorrect, because they were calculated by the Residential PMC that did not have expertise in the multifamily market.

“Because (the offer) is led by the residential program, the PMC doesn’t work with Multifamily customers (and) ...they might not have a great basis for estimating the volume of a certain measure.” (Multifamily Program Staff)

Another staff member explained that the restructuring of the Residential program led to a “lost opportunity” to address the multifamily and single-family sorting rules. As one staff explained, the delineation between residential and multifamily programs within Energy Trust does not correspond to customer experiences.

“In the real world there’s just such an invisible line for most consumers between a single family detached home and a townhouse. People don’t think of them really differently the way we do.” (Multifamily Program Staff)

These market distinctions also make it more challenging for Energy Trust staff to design and deploy programs as they are targeted to specific housing types, which may not correspond to the communities where these customers live.

“Are you going to explain why this is developed for that specific housing type to a person who lives in a town or city? The city (resident) is either excluded or doesn't have the same access path. It's critical that we figure out how to integrate multifamily stuff into the work we do to be effective.”
(Multifamily Program Staff)

However, the program staff reported that “the bigger issue is engaging the customers and stakeholders and having more of a coordination point or coordinating together in the market between residential and multifamily programs.”

“Some programs work together with the stakeholder but in other instances the (program managers) might not know that the other ones already spoken to this group, and it can be confusing... The most confusing part for the customer is hearing different messages from different individuals about the programs.” (Multifamily Program Staff)

To minimize those issues, the staff meet with the Multifamily program staff and the Multifamily and Residential PMCs to coordinate upcoming activities. The Energy Trust staff have also developed communication protocols for each of the PMCs to keep in mind around engaging with CBOs. Energy Trust staff are also working to make sure that the PMCs “don't have two different people responding back to two different people in the same organization.” Still some issues slip through the cracks, as the following program staff member observed:

“If the Multifamily (program) has a strategy that residential might want to change something to align with them, we've learned the importance of trying to let each other know earlier on, so that everybody can kind of plan accordingly...but these topics are currently not addressed in the monthly meetings and so there is room for disconnects.” (Internal Program Staff)

We're all very busy, and so it is building in more and more meetings for regular touchpoints in order to have those conversations. And maybe there's a better way to do that, that does not require meetings.”
(Multifamily Program Staff)

Coordination with Solar Program

The solar team staff are not directly engaged with the Residential program staff, as they work on a different set of tasks with a separate vendor. However, this current arrangement has led to some “structural disconnects” in developing Energy Trust's specific marketing resources. As the following comment illustrates, the solar team tries to coordinate marketing activities with the Residential program staff.

“We coordinate very closely with the new homes program, with BPA's new Construction Program, and have some dedicated scope of work in the PDC contract to work together on some efforts, including delivering incentives and scoping out new opportunities. We don't have that same level of coordination on (for the Home Retrofit program) or on the other pieces of the residential side.” (Solar Program Internal Staff)

3.2 Coordination with NEEA and the Utilities

3.2.1 Relationships with Energy Trust

The electric utilities view their relationship with Energy Trust favorably as several utility respondents indicated that it made sense to “align” their programs with the offerings from Energy Trust. “We have a shared market, so it makes sense to enter into a contractual relationship” especially for the Retail Products Programs which provides instant rebates for heat pump water heaters, one utility staff member explained.

One electric utility staff member noted that their program offerings in other territories overlap with Energy Trust's HVAC programs, and a subset of contractors work on programs for both the utility and Energy Trust.

The utilities worked together with Energy Trust to promote incentives for smart thermostats and ductless heat pumps to residential customers and are looking for ways to collaborate with Energy Trust in the future.

Energy Trust also teamed up with Pacific Power to begin running a Home Energy Reports (HER) program. As one staff member explained, "This was a somewhat unique interaction with the Energy Trust as normally we're not running programs in Oregon." The utility staff developed the HER program as a pilot program and shared the program features with Energy Trust staff. After a series of meetings, the two organizations decided to coordinate on this offer, with Pacific Power launching the HER program and Energy Trust staff tracking the savings.

The Residential program staff noted that this coordination led to accessing more granular energy usage information from this program, which informed the Energy Trust's marketing tactics for this program.

The Residential program staff explained that the electric utilities are looking to work with Energy Trust to advance Demand Response programs in the Northwest, especially as these utilities face capacity constraints.

Energy Trust also has a special arrangement with Clark Public Utilities District (PUD), that promotes gas measures along with the measures offered by Clark. As one internal staff member explained, "Our connection to Clark has been from a standpoint of trying to find efficiencies as all of our gas customers are also served by Clark PUD...so we aren't coming to the customer from two different sides."

One gas utility also described how their organization worked with Energy Trust on coordinating the Integrated Resource Plan (IRP) which helps determine how much energy efficiency is available, which was very helpful in establishing goals¹⁰.

Another gas utility staff member commented that the semi-annual meetings with Energy Trust staff to discuss marketing co-ordination was "valuable." The respondent added, "I actually wouldn't mind quarterly visits" with Energy Trust staff.

The electric utility staff also coordinate program offerings with NEEA to promote DHPs, but these efforts have been less successful as the incentives between the organizations don't match up, so the contractor has inconsistent rebate offers from the utility and NEEA.

3.2.2 Delineation of Roles and Responsibilities

The electric utilities indicated that the necessary procedures were in place to direct their customers to Energy Trust programs. The utilities have trained their call-center staff and believe that the front-line staff are aware of the Energy Trust program offerings.

"I think most customers see the utility and Energy Trust brands on things and know there is a partnership out there." (Electric Utility Staff)

The gas utilities also have procedures in place through the call center to direct customers to Energy Trust's Residential program, but one staff member does not think the differences between the program offerings are "readily apparent" for the customers and the process is "a bit convoluted for customers."

¹⁰ Note, Energy Trust staff works with all the gas utilities to develop IRPs, but this topic was only mentioned in one respondent interview.

“Customers are a little confused why Energy Trust rebates are different for their customers in Washington.” (Natural Gas Utility Staff)

However, the other gas utility staff disagreed and believed that the process of distinguishing their programs from Energy Trust was “pretty seamless.”

3.2.3 Effectiveness of Gas Program Activities

The gas utility staff reported that while the Energy Trust is pushing to achieve its savings goals, the gas utilities are facing very aggressive savings goals for the next 10 years or so. “We want to drive more savings,” but the Energy Trust activities limit the support of gas measures to low-income programs. This lack of emphasis on gas measures for the broader “market rate” programs “risks leaving a good portion of the customers behind who can’t afford to electrify their homes.”

“Our contention has been that the market is not transformed, and that people are still installing standard efficiency furnaces. Energy Trust has said that the market was transformed so customers did not have to be incentivized to put in higher efficiency furnaces. (The natural gas utility staff) disagrees.” (Natural Gas Utility Staff)

Some of natural gas utilities’ staff relationships with Energy Trust appear strained as multiple staff believe that Energy Trust is not interested in supporting gas measures or expanding opportunities for gas installations, especially gas furnaces. Specifically, two gas utility staff members were frustrated that Energy Trust “dismissed” their interest in promoting gas fireplaces during the pandemic as they believed that was not a viable offering. However, there was pent-up demand for these improvements, which had been overlooked by the Energy Trust staff as the following comment explains.

“Energy Trust didn’t listen to us. During COVID-19, they didn’t want to promote fireplaces as they thought people wouldn’t be spending money on that. Then, they went back to program team connection with contractors who install equipment and found it was a completely wrong conclusion. All contractors are overbooked.... Our conclusion is why didn’t Energy Trust want to do it, and why are they not talking to us? They are using COVID as an excuse to pause operations.” (Natural Gas Utility Staff)

To clarify, Energy Trust Residential program staff were directed to prioritize the customer needs and provide solutions to support customers during the pandemic. Unfortunately, this reasoning was not communicated effectively to the gas utility staff.

3.2.4 Conservation Advisory Council¹¹

All five funding utilities have representatives on Energy Trust’s Conservation Advisory Council (CAC), an advisory board comprised of interested stakeholders who advise Energy Trust on strategic direction for its energy efficiency programs. Utilities varied in their reported engagement with the CAC. One electric utility staff member said they “have a seat at the table” while another electric utility staff member works directly with the Energy Trust staff rather than through the CAC.

¹¹ The Conservation Advisory Council is comprised of interest groups and stakeholders with strong experience in energy efficiency. Each member is approved by the board Policy Committee. The council assists the board in developing the strategic plan and assists staff with implementing key elements of the strategic plan, and the annual budget and action plans. <https://www.energytrust.org/about/leadership/#tab-2>. However, starting in February 2022, the board committee structure is changing, and CAC members will be approved by the Board Nominating and Governance Committee. (The Policy Committee will cease to exist).

Representatives from the natural gas utilities also participate in the CAC. Their responsibilities include ensuring good communications, trouble shooting, and overseeing energy efficiency activities in Washington State.

However, one gas utility staff member indicated that his organization is not actively involved in the CAC.

3.2.5 Challenges with Program Operations

The electric utility staff observed that Energy Trust is facing the same types of challenges as any other organization in terms of identifying viable product offerings.

“The easy stuff is gone.” (Electric Utility Staff)

The program managers are exploring new ways to offer energy efficiency programs, whether it is through measure bundling, developing new measures or exploring whole house approaches. There is also the increased pressure of maintaining cost-effectiveness for program offerings.

Programs in Washington State also have additional challenges for both the utilities and Energy Trust staff, including a different regulatory environment, and the definition of the multifamily market. (See Section 5.3 for additional details regarding the challenges with Washington-based programs).

“There has always been a sort of a structural barrier in geography for us. And I think that we bear much of the brunt of that in the electric side because we have all the rural territory.” (Electric Utility Staff)

“There is some overlap in the performance path for builders who need to exceed Washington energy code,” with the Energy Trust requirements. (Electric Utility Staff)

The gas utility staff also reported coordinating their program activities and exploring new ways to engage customers. However, one gas utility opted not to coordinate offers for a smart thermostat program in 2021. However, going forward the gas utility want support Energy Trust’s activities to promote energy efficiency measures.

3.2.6 Barriers to Program Participation

The lack of available contractors was cited one major barrier to program participation, as described by one electric utility staff member.

“Contractors are so busy for many trade allies don’t need to leverage Energy Trust incentives to sell projects...Contractors don’t want to take extra time to explain Energy Trust incentives and that makes it difficult for them to want to participate... it is a huge barrier going forward.” (Electric Utility Staff)

Other barriers for electric customers are the widespread use of resistance heating which created an increased demand for DHPs. However, the electric utility staff explained that the DHP installations are often driven by “cooling” decisions rather than heating. Increased cooling leads to increased energy usage, which is counter to the Energy Trust’s overall savings goals.¹²

The electric utility staff also want to work collaboratively with the gas utilities, especially NW Natural, on developing decarbonization strategies by promoting hybrid heat pumps. “The way the Energy Trust incentives are structured, the customers don’t get an incentive for a hybrid heat pump,” which has created a gap in the market that the staff would like to correct.

Another barrier is the lack of alignment with program incentives and Clark Public Utilities offerings.

¹² Of note, the participating contractors reported that 58% of their customers are interested in cooling options for HVAC equipment, which further suggests that this is an increasing market trend. The Energy Trust’s primary focus remains to promote efficient and fuel-neutral solutions.

“We try to mirror what the Energy Trust is doing to minimize the contractor confusion...but not all (the measures) have the same cost-effectiveness constraints.” (Electric Program Staff)

3.3 Feedback from NEEA

NEEA also works closely with Energy Trust and its program sponsors to develop and support energy efficiency offerings in the Northwest. NEEA provides implementation support for the EPS New Construction program and has worked to develop new technologies such as heat pump water heaters and ductless heat pumps. NEEA also works closely with Energy Trust to develop efficient gas heating products.¹³

“We connect with them around issues like new construction and bringing in kind of new products for us to consider as they launch new products and we're able to build off those new products to implement our programs... examples would be electric hybrid water heaters or ductless heat pumps. New construction is another example of that...So NEEA has been a really great partner helping us better understand what technologies should be considered.” (Internal Program Staff)

NEEA staff manages residential new construction efforts and work with Energy Trust and other funders on areas where the two organizations overlap. NEEA also has a complimentary program called Performance Path which was modeled after Energy Trust’s EPS program; it is offered outside of Energy Trust’s service territory. Over the past few years, both organizations have worked together to better align these programs to minimize confusion among the market actors.

“The requirements should be about the same, so, we work together to align our programs. We have worked together on some training opportunities for some builders or verifiers in our areas.” (NEEA Staff)

NEEA and Energy Trust staff also work together on the Northwest Modeling Group to ensure that the modeling protocol is the same for both the EPS and Performance Path Programs. They use the same data tracking contractor which provides an online resource that allows both the NEEA and Energy Trust programs to operate in a similar way.

“One of the ways NEEA has been helping Energy Trust and, helping ourselves at the same time, is by aligning these two programs, and effectively spreading out the reach of what Energy Trust is trying to do within their territory throughout the rest of the region.” (NEEA Staff)

NEEA also shares some of the same builders and verifiers with Energy Trust for the EPS New Construction Program, creating a “cross-pollination.”

“NEEA and Energy just do have a really good working relationship above and beyond just a simple fact that they are a funder of our organization.” (NEEA Staff)

NEEA also coordinates activities with Clark Public Utilities in Washington, describing NEEA as good intersection between the Energy Trust and Clark.

3.4 Role of Trade Allies

Energy Trust works with trade allies to support them in the Residential program offerings; however, the feedback from the participating contractors about the Energy Trust Residential program was mixed.

¹³ 2020 Annual Report to the Oregon Public Utility Commission & Energy Trust Board of Directors Energy Trust of Oregon April 15, 2021. Updated November 22, 2021. <https://energytrust.org/wp-content/uploads/2021/04/2020.Energy-Trust-Annual-Report.pdf> pp. 20-22; <<Accessed 2-2-2022>>

The internal staff provides a lot of different opportunities for contractors to work with Energy Trust, but the level of involvement varies by firm.

“Many of the contractors who have signed up to be trade allies aren't necessarily active on a regular basis.” (Internal Program Staff)

The PDC staff provides program updates to the PMC trade ally account managers regarding program operations, who then reach out to individual contractors. They also offer a program orientation when a new trade ally joins the program and have held in-person forums with trade allies pre-COVID.

Application processing is a major source of frustration for participating contractors (see Section 5.1 for more details). Several contractors wanted to monitor application paperwork via an online portal. However, Energy Trust staff explained that although there was an online portal in place several years ago, it was not widely used and had relatively low functionality, so it was discontinued.

“The reason we got rid of (the online portal) was the low uptake of project applications. And, quite honestly, we did not have the internal capacity to maintain it, because it was very complex, the backend data, it had a lot of errors with it.” (Internal Program Staff)

Energy Trust sets aside business development funds, \$4,000 for MBE/Minority or Veteran-Owned firms or if the contractor is in a rural area. Other contractors may receive up to \$3,000 annually. These funds are designed to help reimburse the marketing and training costs or subsidize equipment purchases for field staff, such as tablets or blower door tests. But only 30% of the contractors we interviewed were aware of the Business Development Funding opportunities. For the first three quarters of 2021, the Residential Business Development Fund distributed a total of \$45,151 to eligible trade allies.¹⁴

Energy Trust also provides training resources for its participating contractors; however, many contractors believe the training is too heavily focused on HVAC systems.

“We're pushing HVAC a lot. We are pushing water heating. We did a slight push for installation of attic insulation specifically last year. Windows contractors feel a little left behind.” (Internal Program Staff)

Incentives for contractors serving manufactured homes are lower and “what we pay contractors does not even cover their costs in a lot of cases. So, it's hard to get contractors onboard.” Contractors also must hold a special certification to work on manufactured homes, leading to a shortage of qualified weatherization contractors who can provide services to manufactured homes.

“The ducts underneath of these manufactured homes can be completely obliterated. What I've heard the feedback on, is that if they have to rebuild the ductwork or if even there's a crossover piece or different components of that, it just then, absolutely does not make the business case, as we were talking about before, for them to participate in that offer.” (Program Staff)

3.4.1 Instant Incentives

While many incentives are paid to the customer, customers often have the option of signing the incentive over to their trade ally for a discount on their projects and some trade allies are approved to offer instant incentives¹⁵ – where Energy Trust agrees to pay the incentive to the trade ally in exchange for offering the

¹⁴ CLEAResult, 2021. “Energy Trust of Oregon Residential Quarterly 3 Report,” p. 55.

¹⁵ CLEAResult 2021. “2021 Program Implementation Manual” to be an Instant Incentives approved trade ally, contractors must meet these minimum requirements: Be a Residential trade ally; Attend an orientation delivered by program staff; Abide by the terms and conditions in their signed Instant Incentives Contractor Participation Application (Form 372IN) and all terms and conditions in the Trade Ally Enrollment Application (Form 1171A), and the Residential Trade Ally Addendum (Form 371A). p. 145.

incentive as a discount on the customer's invoice – to all their customers. To speed up the payment process, Energy Trust offers participating contractors the option of signing up for electronic payments. However, few of the participating contractors we interviewed receive the electronic payments, preferring instead to receive traditional rebate checks.

Thirteen of the surveyed contractors offered or have used Instant Incentives. However, contractor feedback regarding these incentives was mixed, as two believed they were good ways to “fast track projects” while one contractor said the customer distrusts these offers, as they think they are fake.

“The Instant Incentives weren’t even part of the program until just last year...The program was popular with customers and there may have had a couple jobs that would not have otherwise happened just because of bonus itself. But it was widely unpopular with accounting department and having to wait two or three months...It raises all types of types of red flags.” (Contractor).

3.5 Manufactured Homes

The Manufactured Homes Program component of the Residential program relies heavily on retailer participation and the relationships maintained between subcontractor Earth Advantage (EA)¹⁶ field representatives and participating retailers to reinforce the program's reach, visibility, and communication. The Residential PMC works with industry leaders and EA's field representatives to minimize barriers and emphasize the benefits of high-efficiency new manufactured homes.

Retailer outreach is a critical strategy the PMC uses to attract program participants. According to the PIM, the EA field representatives visit retailers on a four to six-week rotation, except in cases of difficult travel during winter months. EA field representatives are expected to remain in close contact with the store to ensure they have a strong understanding of Residential incentives and requirements. They also conduct on-site trainings with sales associates and store managers at each participating site.¹⁷

EA also works with local and regional organizations to share information and collaborate on outreach effort with organizations and industry associations.

Although the PDC maintains the current contact information, the list of program participants provided for this evaluation was seven years out of date, making it difficult to complete the proposed number of participant interviews. The lack of readily available current contact information suggests there is a disconnect in program operations between the program implementer and Energy Trust Staff.

The three respondents also explained that the current application process is completely out-of-sync with the home delivery and siting activities. Specifically, the program applications must be submitted within 60 days of purchase; however, this timeframe is unrealistic according to the retailers, which makes it more difficult to enroll customers in the program.

Although all three manufactured home retailers reported that the program implementation contractor is engaged with the retailers, they did not receive any of the marketing support materials developed by Energy Trust to promote this program. Furthermore, the retailers were frustrated by the geographic limitations of the program since it also limits their sales opportunities.

3.5.1 Manufactured Home Replacement Pilot

Energy Trust launched the Manufactured Home Replacement Pilot in 2018 to retire aging manufactured homes and replace them with code exceeding energy-efficient new manufactured homes.¹⁸ This program

¹⁶ Earth Advantage works as a subcontractor to the PMC, CLEARresult.

¹⁷ CLEARresult, 2021. “2021 Program Implementation Manual,” September, p. 323.

¹⁸ Ibid, pp. 328-29.

also tries to build partnerships within communities which integrates energy, poverty alleviation and affordable housing investments. Qualified new manufactured homes must meet the standards of the Northwest Energy Efficient Manufactured Home Program (NEEM) delivering the maximum cost-effective efficiency benefit.¹⁹

The Energy Trust staff support customers throughout the application and approval process. The program is open to participant households living in a defined Manufactured Home in Energy Trust's Oregon service territory. The participants must also meet eligibility requirements regarding heating fuel usage, occupancy, and income qualification.

3.6 New Construction

EPS New Construction engages with various market actors including builders and verifiers, HVAC and insulation contractors, real estate professionals, home builder associations, nonprofits, CBOs, municipalities, developers, and other market stakeholders such as NEEA and the Oregon Department of Energy. The goal of this program is to encourage the construction of energy efficient homes above code by builders in its trade ally network.

The Residential PMC manages relationships with various market actors in the EPS New Construction market. The program is further supported by a PDC, TRC. The PDC is responsible for the recruitment, improvement, analysis, and general management of the program's trade ally network. Verifiers are the builders' primary conduit to the program, providing third-party verification of homes that the verifier submits to the program for an EPS and corresponding whole-home cash incentives.

The recruitment process for builders and verifiers includes establishing a "hotline" that allows the staff to follow up with interested contractors. The verifier recruitment process is slightly different as it is more of a "peer-to-peer" relationship that requires "a lot of handholding."

"Some (verifiers) are very busy, and we support them when they get behind (with the work)." (PDC Staff)

The PDC also provides trade ally training and support to increase awareness of program requirements and encourage increased performance. Subcontractor trainings support builders and verifiers by focusing on how to achieve applicable program requirements efficiently and consistently.²⁰

According to the program staff, the current structure with TRC has been effective, as they are a subject-matter expert on new construction programs.

"TRC has really taken that and evolved that pretty substantially ... they're doing a good job." (Internal Program Staff)

"The marketing team is interacting regularly for southwest Washington and also simultaneously engaging TRC on new construction marketing needs." (Program Staff)

Program staff indicated that there are still some challenges in finding new qualifying measures to include in the New Construction Program.

"I feel we face some constraints on duct sealing and air sealing. There could still be more so duct sealing in single family homes... (it is) a viable thing to garner energy savings, it's just very challenging." (Internal Program Staff)

¹⁹ https://www.energytrust.org/wp-content/uploads/2021/05/Manufactured-Home-Replacement-Pilot-Evaluation_Final-.pdf

²⁰ CLEAResult, 2021. "2021 Program Implementation Manual," September, p. 323.

A gas utility staff member raised a similar concern noting, *“Building codes are changing and standards- eventually get to a point of not enough energy savings to continue a program.”*

3.6.1 Feedback from Home Builders

The participating home builders indicated that the program participation process was relatively easy for veterans, but it may be more challenging for new program participants to explain to customers the ventilation requirements.

Most builders indicated that the program is performing well. However, one home builder indicated that program performance has been slipping.

The participating home builders indicated that while the incentives are helpful, they are not necessarily a factor in encouraging program participation. Several builders said most participants were already on the path to participate in the program without the incentives.

Although a few builders indicated that the program incentives help to justify the improvements to offset the cost of energy efficiency measures, one builder explained that the incentives only cover 80% of the installation costs.

Finally, one builder noted that it becomes more challenging to meet goals with updates to codes, such as the 2018 Washington State Energy Code, that increase the baseline for new homes, thereby increasing program requirements. Another builder explained that with the increasing code improvements, the rebate incentives are not sufficient to cover the rising costs.

3.6.2 Feedback from Home Verifiers

The verifiers for the New Construction Program provide a variety of services throughout the entire new construction process from initial design to completing third-party inspections, energy modeling, conducting blower door tests and completing final inspections to verify mechanical systems. The building verifiers believe that some homeowners value their services as it builds confidence with the home. However, two verifiers indicated that from their perspective, homeowners only see these services as an added cost without understanding the value of this program. They suggested that it would be beneficial for Energy Trust to educate homeowners and real estate agents about the value of the verification process.

3.7 Retail Products Program

The Retail Products Program was one of the three residential programs that was consolidated into the overall Residential program. The program is an upstream/midstream program that engages directly with program partners, which could be a manufacturer, a retailer, or a retailer’s representative.

The retail midstream component capitalizes on the sale of ENERGY STAR qualified lighting and appliances and efficient water heaters to increase market share and heighten consumer awareness of both energy and water savings. The PDC makes efficient products more accessible to customers through a buy-down of the initial cost of the product and prominent product placement in stores. Prior to 2015, Energy Trust participated in the Simple Steps retail program.²¹ Beginning in 2015, the residential sector directly implemented a similar retail program to have more control over incentive levels, marketing creative and retailer relationships.²²

²¹ <https://www.bpa.gov/-/media/Aep/energy-efficiency/evaluation-projects-studies/160808-final-simple-steps-report.pdf>

²² CLEAResult, 2021. *“2021 Program Implementation Manual,”* September, p. 330

Currently, the PDC staff engage with retailers and distributors who sell lighting, water heaters, and appliances, The PDC program staff provides ongoing support with specific marketing activities, administrative support for specific program offerings and with marketing efforts and sales training, according to the PMC.²³

The PDC interacts regularly with participating retailers, specifically at the beginning of each program year. The PDC conducts periodic visits to each participating retailer throughout the year to maintain program awareness. Although COVID-19 restricted in-store visits, the PDC was still required to follow-up with each participating retailer.²⁴

In addition, Clark Public Utilities has continued to participate in this program to promote water heaters, even though the larger Simple Steps Program ended in 2020.²⁵

3.7.1 Findings from the Literature Review

The 2020 Annual Report from CLEAResult reported that Energy Trust had 56 retail lighting promotions across Energy Trust's service territory with 27 manufacturer partners, 24 retailers and 507 stores.²⁶ Promotions for retail water heaters included six promotions among five manufacturers and six retailers in 47 stores.²⁷

The Program Staff developed a new retail lighting strategy targeting lagging LED markets in 2021 that focuses on retailers, such as dollar stores or small hardware stores, that serve low-income customers and rural communities while significantly reducing incentives at big box stores.²⁸ The promotional activities continued throughout 2021 and targeted new initiatives, including retail appliances and retail water heating promotions focusing on stores in rural locations.²⁹

3.7.2 Findings from the In-Depth Interviews

The midstream program design eliminates the need for any customer information, as the rebates are passed directly to the retailers or manufacturers rather than to the consumer. This approach minimizes work involved processing incentives. However, the tradeoff is that the Energy Trust does not collect any customer information, so the only way to assess program operations is through input from the participating retailers and manufacturers.

"Our incentives flow essentially upstream mid-stream, and do not hit what we call the 'downstream customer.'" (PMC Staff)

The incentive levels are modified during specific times of the year to promote the purchase of specific products such as water heaters, appliances, and lighting products.

"We change incentive levels as needed to kind of drive additional savings and or manage too budgets, which has been kind of more of a more recent challenge in the residential program as far as funding." (PMC Staff)

²³ Ibid, p. 329

²⁴ Ibid.

²⁵ Ibid.

²⁶ CLEAResult, 2021. Energy Trust of Oregon, Residential Annual Report for PY2, March 1, p. 9.

²⁷ Ibid, p. 10.

²⁸ Quarter Two 2021 Report to the Oregon Public Utility Commission & Energy Trust Board of Directors, August 13, 2021, <https://energytrust.org/wp-content/uploads/2021/08/ETO.Q2.2021.Quarterly-Report.pdf> <<Accessed 2-02-2022>> p. 21.

²⁹ CLEAResult, 2021. "Energy Trust of Oregon Residential Quarterly Report," p. 68.

The Retail PDC manages all the relationships with the retailers and manufacturers directly, relying on field staff to conduct on-site visits (pre-COVID) and provide ongoing retailer training. During the past year, the program has evolved from promoting lighting measures to including a broader range of equipment including water heaters, clothes washers and dryers, and advanced power strips (for a limited time). Incentives for showerheads were eliminated as the measure was no longer cost-effective.

The program implementation contractor also explained that the midstream incentives directly affect the sales of products, often tripling the volume of sales for water heaters compared to downstream incentives.

Retailer Recruitment

The program implementer has four representatives located throughout Energy Trust's service territory who are responsible for retailer recruitment and ongoing training and interaction. The program implementer also issues a Request for Proposals every year to solicit new retailers or manufacturers; however, most participants "roll over" from one year to the next.

The retailers and manufacturers were recruited into the program based on their previous relationship with the program implementer, at either the national or corporate level. Additional retailers have been added to the program as part of an "ongoing" process to increase the overall market presence within Energy Trust's service territory. The implementation contractor established tiers to further differentiate the market based on store location.

Tier 1 stores are the "big box" stores located in the urban areas that sell all the qualifying retail measures including lighting and appliances. These stores receive the smallest incentive levels. Tier 2 stores are the regional chain stores, such as Fred Meyer. Tier 3 stores are the hardware stores and grocery store rural locations with relatively low sales volume. Tier 3 stores are highest priorities for Energy Trust, and thus receive the largest midstream incentives because these stores tend to have the highest prices on the eligible equipment.

"We're trying to help them be competitive with those big box stores... (the incentives) have helped them be more competitive in the market." (PMC Staff)

In the past two years, the implementation contractor has started working with the Nationwide Marketing Group, which represents small independent stores across the United States. Engaging with this retailer partner required changing some program requirements, such as sales reporting, as many of these smaller stores do not have electronic Point-of-Sale (POS) systems. However, Energy Trust has been able to verify sales volume using the manufacturer rather than the retailer information.

The national and regional representatives appear very effective providing the program and incentives to consumers via retailers. However, the national representatives have limited contact with the local stores. Overall, the respondents reported generally positive feedback regarding the Energy Trust's Retailer Program, with one describing it as a "good basic program."

Feedback from the retailers regarding the actual retail promotions was mixed. Although the PMC reported contacting the local store staff, none of the respondents could recall specific details.

Retailer Training

The regional representatives provide the retailers with "talking points" and supporting materials to inform the participants about the specific promotions. However, the level of engagement with these retailers varies based on the store type. The Tier 1 stores have high staff turnover, so there are always new sales representatives to educate. In contrast the Tier 3 stores located in the rural areas have long-term staff who have been working at that location for decades.

The purpose of the retailer training is to “reinforce the program” and answer any questions about the promotion or the specific equipment. The implementation contractor explained that they have been emphasizing the water heater promotion to their sales partners, as that is an area of particular interest for the wholesalers, manufacturers, and installation contractors.

When asked about program training and in-store support, the manufacturers and representatives had a general knowledge of the program and interacted with the implementer. However, one in-store respondent indicated very limited knowledge of the program and had received no training or implementer interaction except emails regarding inventory levels.

Another respondent, who sells water heaters directly to consumers, reaches out directly to program staff with questions regarding program promotions, however this manufacturer does not recall participating in any specific promotions or annual promotion planning in the past several years.

All the retailers indicated a willingness to work with Energy Trust program staff regarding program changes, marketing, and new measure development. Six respondents represented national retailer programs, who can share insights on successful upstream program initiatives nationally. Two respondents represent regional stores and can offer guidance regarding program modifications due to regional impacts due to the wildfires and effective communication strategies for reaching customers beyond the metro-Portland area.

3.8 Assess Satisfaction with Energy Trust's Residential Program

The respondents rated their satisfaction on scale of “1” to “5” where “1” means “Not at all Satisfied,” and “5” means “Very Satisfied.” Despite the negative feedback from some market actors, overall, these respondents gave high satisfaction ratings for both the Energy Trust Residential program overall, and for the Energy Trust Staff. Tables 4 and 5 summarize the distribution of these scores while Figures 5 and 6 illustrate the distribution of the satisfaction scores of “4” and “5”, suggesting “Satisfied.”

Table 4: Summary of Satisfaction Ratings for Energy Trust Overall Across Market Actors

Market Actor	Satisfaction Rating				
	“1” - Not at all Satisfied	2	3	4	“5” - Very Satisfied
Contractors		2	3	13	17
Home Builders			2	2	1
Home Verifiers			2	2	2
Retailers/Distributors				5	3
Manufactured Home Retailers				1	2
Community Based Organizations			2	5	4
Total	0	2	9	28	29

Table 5: Summary of Satisfaction Ratings for Energy Trust Staff³⁰ Overall Across Market Actors

Market Actor	Satisfaction Rating				
	"1" Not at all Satisfied	2	3	4	"5" Very Satisfied
Contractors		1	2	7	24
Home Builders			2	1	1
Home Verifiers				1	5
Retailers/Distributors			1	3	5
Manufactured Home Retailers				1	2
Community Based Organizations					11
Total	0	1	5	13	48

Of note, the respondents did not differentiate between Energy Trust’s internal staff and the staff from the PMCs or PDCs. Rather, they provided ratings based on their interactions with the Energy Trust program personnel.

Table 6 summarizes the average satisfaction rating for each program element. Overall, these ratings suggest that most market actors are satisfied with the Energy Trust Residential program and with the Energy Trust staff.

Table 6: Summary of Market Actor Satisfaction Ratings

Market Actor	Average Satisfaction Rating for Energy Trust Residential Program	Average Satisfaction Rating for Energy Trust Program Staff
Contractors	4.29	4.59
Home Builders	3.60	3.75
Home Verifiers	4.00	4.91
Retailers/Distributors	4.37	4.37
Manufactured Homes Retailers	4.66	4.50
Community-Based Organizations	4.68	5.00

³⁰ The respondents did not differentiate between internal and external staff as these rating are based on their interactions with the personnel who interact directly with them. Therefore, these ratings include Residential program staff and staff from the PMC and the PDC.

3.9 Assessment of Program Processes

3.9.1 Budgeting

The Residential PMC, in collaboration with Energy Trust, establishes 2-year delivery and incentive budgets annually. Energy Trust determines the budgeting timeline, which generally runs from July through December.³¹

The program staff indicated that the restructuring also increased coordination for program budgeting as the staff has worked hard to align its offerings across markets, such as coordinating the “Savings Within Reach” single-family offering with the Existing Buildings program’s multifamily offerings.

“We worked really hard to keep the incentive amounts the same between the residential and multi-family programs so that it’s not confusing to a customer or to a trade ally.” (Program Staff)

One utility staff member provided a detailed explanation regarding its role in the budgeting and planning process with Energy Trust every year. Planning for the efficiency programs begins in the third quarter of the previous year and the utility staff are given the opportunity to review and comment on the Energy Trust’s proposed programs and budgets. The utility staff explained that they receive updates about “global” program changes and specific information about programs that affect rural customers.

3.9.2 Code Changes

Findings from the Literature Review

The literature review identified the following key accomplishments regarding code changes that directly influenced the EPS New Construction Program activities. These findings include:

- On December 8, 2020, program staff completed a four-part Zoom call series on the new Washington energy code. The new Washington energy code allows builders to choose their investments in energy efficiency, so program staff encouraged exceeding energy code and participate in EPS-NC.³²
- TRC also updated the Measure Approval Document (MAD) for both Oregon and Washington to align with the release of the next iteration of energy codes in the respective states.³³

Findings from the In-Depth Interviews

Residential program staff indicated that they have been able to upgrade code changes for the EPS Homes Program.

“It was good collaboration, and we developed a new updated code offer.” (Internal Program Staff)

“Code change as part of new construction in southwest Washington has certainly been a big discussion this year. TRC is a subject matter expert there.” (Internal Program Staff)

NEEA also supports building stronger energy codes in Washington State, which further supports Energy Trust’s New Construction Program. “We coordinate really well.” (NEEA Staff)

“Energy Trust is not able to really advocate for particular codes, but they are able to work with people who can do and provide technical information, or experience, or information from their programs. NEEA, however, develops code proposals.” (NEEA Staff)

³¹ CLEAResult, 2021. “2021 Program Implementation Manual,” September, p. 6,

³² Energy Trust of Oregon, EPS New Construction 2020 Annual Report, TRC, February 22, 2020, p. 36.

³³ Ibid

NEEA staff view this joint coordination work on codes allows both organizations to support each other's mission.

"Codes and standards change for us have an impact really on individual measure-level cost effectiveness... We have some equipment that will have changes in federal standards...." (Internal Program Staff)

"The code has reached the maximum level, so it is becoming harder to find ways to go above the code." (Home Builder)

3.9.3 Forecasts

As part of the Q3 forecast, typically in September-October, the Residential PMC provides updated end-of-year savings and incentive budget forecasts to Energy Trust based on actuals to date, historical performance, upcoming initiatives, and measure mix distribution.³⁴

The new organizational structure also provided to a way to holistically forecast Residential activities. The structure prioritized the quantitative and qualitative impacts which helped the staff "create targets to remain in compliance over a three-year project." This new approach also broke down tasks into smaller projects described as "quick learnings" with smaller samples and budgets which allowed for a faster "go-no-go" decision.

According to the PMC staff, the results of each promotion are tracked and used to provide insight into future offers.

3.9.4 Measure Development Process

Energy Trust's 2021 PIM describes the approach used to identify, develop, and refine new or updated program offers. Measure updates are driven by several factors including updating measures due to code changes, interest in a new technology, interest in testing the market response, or identifying new ways to increase overall savings. The formal process consists of four stages: idea generation and prioritizing, scoping, detailed measure development and approval and publishing.³⁵ However, the term "MAD," which stands for "Measure Approval Document" is often used interchangeably to describe both the measure development process and the ultimate outcome: the Measure Approval Document.

Our process evaluation focused on the details regarding the measure development **process** rather than the development of the technical specifications that are included in the Measure Approval Document.

Findings from the Literature Review

As the Residential PMC, CLEAResult staff work closely with Energy Trust to develop new measures and update existing measures. In 2020, Residential PMC supported, developed, or updated 23 MADs.³⁶

³⁴ CLEAResult, 2021. "2021 Program Implementation Manual," September, p. 6.

³⁵ Ibid, pp. 294-296.

³⁶ CLEAResult, 2021. "2020 Residential PMC Annual Report," March 1, p. 92.

Findings from In-Depth Interviews

The new program structure has also changed the way in which new measures are developed as it has moved to a “longer range forecasting for shifts in the market that could create new opportunities and what that would do to the performance of the portfolio of investments.”

Program staff explained that the MAD process takes a “flavor of program design” that is overlaid with savings or savings adjustments. The new program structure has allowed the staff to “be more effective in driving new things into the market” coupled with better organization within the Residential team.

Measure development funds are allocated during the budgeting process with the intent to bring new technologies to market. Measure Development is part of the larger annual budgeting process that may “cut across multiple channels.” The program staff communicates frequently with the PMC on the measure development process.

The program staff explained the process used for heat pump water heaters. The measure went through the measure development process and then it was handed over to the operations group to develop an offer for the customer. The offer then moves to the customer acquisition group to develop the contract relationship with the distributors and launch the product in the market.

The internal program staff also pointed out that most of the technologies screened for the Residential program may also fit within segments of the multifamily market, such as duplexes, triplexes, and condominiums. The measure development staff will create “placeholder versions” of a measure under differing baselines. They will then use modeling to estimate program savings under different scenarios.

“It takes time to develop the measure... We want to make sure that everything is cost effective.”
(Internal Program Staff)

The New Opportunities Group works with the utilities and have launched joint investigations into new technologies, such as new types of Distributed Energy Resources (DER). NEEA staff described Measure Development as a “well-defined process” that has been working well as they coordinate on code changes in the new construction market.

3.9.5 Developing Pilot Programs

The current process for developing pilots has led to some success stories shared by the staff, such as the development of the Manufactured Home Replacement Pilot Program and the Extended Capacity Heat Pumps offer. As one staff member explained, “it went from a pilot that had quite a lot of stakeholder engagement to now a full-blown offered this year.”

The staff explained there are established procedures for coordinated research projects and the Residential team, internal staff, and the PMC implementers are pretty “savvy” in navigating those processes.

3.9.6 Fixed Price Promotions

Energy Trust offered several “Fixed Priced Promotions (FPPs)” for heat pumps and manufactured homes programs several times a year. Details regarding these approaches are summarized next.

Ductless Heat Pump in Rentals Fixed Price Promotion: The Ductless Heat Pump in Rentals Fixed Price Promotion began in Q4 of 2019 and was offered through the first half of 2021; however, the reservation system for installed projects was operational through the Q3 of 2021. The customer could receive incentives ranging from \$1750-\$2,000. Qualifying equipment included One-to-One ductless heat pumps with a HSPF 9.0 or greater, compressor must be inverter-driven and must be installed in the primary living space of residential rental properties. The customer must be property manager or owner of the rental property and cannot be owner occupied. The program goals included:

- Improving comfort and energy savings for tenants of rental homes and who have historically low access to energy efficient equipment
 - Supporting property managers with simple, consistent out-of-pocket costs and supports contractors by eliminating the need to continuously create bids throughout the year by setting a fixed price that could be conveyed to multiple owners.
 - Support measure cost-effectiveness by keeping equipment prices down and provides homeowner/property owner DHP user education to help ensure tenant behavior is optimizing the performance of the unit

Heat Pump in Manufactured Homes Fixed Price Promotion (2019-2022). This is an annual promotion delivered by a limited roster of select trade allies committed to a fixed price for central and ductless heat pump systems. Trade allies are selected through a yearly RFP process and companies with the lowest pricing, most comprehensive services, and greatest experience with manufactured homes are qualified. Incentives are for \$2,500 for DHPs and \$3,000 for Central Heat Pumps (CHPs). Qualifying equipment includes any AHRI listed product. Central Systems must have a minimum HSPF of 8.2 and Ductless systems must be 9.0+ HSPF. The customer must own and occupy or own-to-rent an existing manufactured home built on or after 1985. They must also use a central ducted furnace as their primary heating source which utilizes Pacific Power or Portland General Electric. Trade allies must respond to an RFP in November of the previous year to participate in the annual promotion. Trade allies selected to participate must then abide by all rules defined on their participation agreements for the promotion, which includes their Fixed Price and equipment details. The goal of the promotion is to make cost-prohibitive heating and cooling equipment affordable to existing manufactured homeowners by reducing the barrier-to-entry through enhanced incentives.³⁷

Heat Pump/Hybrid Water Heater Fixed Price Promotion (June-December 2020; April-July 2021). This was a limited-time offer developed in partnership with distributor (General Pacific), select group of installers, manufacturers (i.e., AO Smith & Rheem), NEEA and Energy Trust of Oregon. The fixed-priced proposal was promoted for both professionally installed and DIY hybrid water heaters (HWH) via targeted mailers throughout the Portland Metro, Mid-Willamette, and Central Oregon areas. This offer was designed to bring the installation and equipment prices down to a significantly low price to drive interest among customers looking to upgrade their water heater. The program was open to all Residential Energy Trust customers.

During the first promotional run in 2020, the installed price for a HWH was as low as \$799 (compared to \$2,100 average non-promotional cost in 2020). The cost of a HWH tank (not installed) was \$399 (compared to \$1,300 average non-promotional cost in 2020). During the second promotional run in 2021, the installed price for a HWH was as low as \$1,445 (compared to \$2,500 average non-promotional cost in 2021). The cost of a HWH tank (not installed) was \$495 (compared to \$1,395 average non-promotional cost in 2021).

The incentive amounts for both promotional periods included \$550 plus a \$150 shipping bonus for tanks delivered to targeted rural locations.

The measures are identified through a Request for Qualifications (RFQ) and have an exclusive trade ally network to provide the services. Energy Trust also increases the level of Quality Assurance (QA) for these projects to ensure that the measures are installed properly.

Overall, the staff reported that the FPPs were well-received by both trade allies and customers.

³⁷ <https://www.energytrust.org/incentives/limited-time-promotion-for-ducted-and-ductless-heat-pumps/>

“Customers were particularly pleased with the fixed price heat pump promotion...the customer was glad that we gave them the opportunity to access a new heating system, or increasingly so a cooling system, for a technology that was previously entirely out of their price point.” (Internal Program Staff)

The FPPs offered by Energy Trust were complicated by supply chain constraints which led to increasing prices for the materials. But the HVAC contractors could not pass these increased prices onto the customers due to the FPPs (see Section 4.3.3).

“The price ceiling that we set for a promotion could just get obliterated by those things. So, nimbleness will be a key component of how we run those.” (Internal Program Staff)

Residential staff have not yet been able to accurately assess the effectiveness of all these promotions, as it is hard to gauge interest for these relatively short-term offerings. However, the staff also believes that these short-term marketing promotions will eventually pay dividends by creating awareness among customers who may make a purchase later.

Feedback from Utility Staff

The electric utility staff reported that the FPPs created high customer satisfaction, especially for the lower-income populations who cannot absorb the higher prices for installations. However, while FPP worked successfully in the past, the electric utility staff doubt that this will be a viable approach going forward due to the rising costs of products. These increased costs make it impossible to lock in prices for specific measures as the manufacturers raise prices frequently due to the supply chain issues.

3.10 Impacts of COVID on Program Operations

3.10.1 Findings from the Literature Review

Impacts on New Construction

In March 2020, Oregon’s Governor designated construction as an essential business, which meant following strict rules while on the job site. The EPS New Construction verifiers and program staff coordinated site inspections with the site superintendent and followed all social distancing and personal protective equipment (PPE) requirements. To support EPS New Construction verifiers during the COVID-19 pandemic, TRC developed an exception protocol for scenarios where a verifier is unable to conduct in-person inspections.

The Washington New Construction Program was more severely impacted by COVID-19 than in Oregon due to the following:

- **Construction Moratorium:** Washington’s Governor introduced a construction moratorium in Q1 2020, which delayed construction completions expected in March-May until May-July.
- **Staffing shortages:** Washington verifier companies laid off staff due to uncertainties of business viability during COVID-19. Most staff have since been rehired but were not able to process homes backlogged in 2020.³⁸

Impacts on New Manufactured Homes:

COVID-19 contributed to significant delays in new manufactured home factory production in 2020. Although the demand and sales of new manufactured homes continued steadily, the Energy Trust incentive can only be redeemed after the new manufactured home is sited, which often exceeds the 60-day time limit for the incentive.

³⁸ Energy Trust of Oregon, “EPS New Construction 2020 Annual Report,” TRC, p. 29.

The Manufactured Homes retailers also reported that material and employee shortages contributed to production delays of three to ten months. Most of the Oregon manufactured home inventory was sold to customers who were displaced by the California wildfires. These material and inventory shortages have driven up manufactured home costs and increased pressure on retailers forcing them to sell display models.³⁹

Fortunately, the inventory pressures were relieved by Q3 2021, as production volume increased significantly. Although the industry is still experiencing supply chain disruptions due to COVID, the year-end projected volume is expected to exceed 149 projects.⁴⁰

3.10.2 Findings from In-Depth Interviews

The worldwide pandemic affected the Residential program in its interactions with customers, trade allies and other market actors. The most significant effects were on the Retrofit program, in which contractors faced labor and material shortages, compounded by delays in processing the applications (see Section 5.1.2). This section summarizes the impacts from the pandemic from various perspectives, illustrating that there were both positive and negative outcomes from the COVID-19 pandemic.

The Residential program staff reported an “uptick” in program activity as the staff was tasked to create tactics to support the trades and positively affect the residential energy efficiency market. Specifically, the Energy Trust staff created additional incentives for ceiling insulation which drove “more activity than we anticipated.”

“There has been a lot of demand and people have had a lot of money in their pockets. Some trades have just been bombarded with demand from those factors. That’s been a challenge for us from an operational perspective, working with the contractors. The required changing to remote work which, created another set of challenge. It became clear very quickly that we were going to have to all coordinate even more.” (Internal Program Staff)

COVID Impacts on Program Operations

The pandemic led to a significant decline in participating contractors as there has been an “exodus of talent” combined with an increased demand for home improvements led to a shortage of qualified installers.

COVID also forced contractors to conduct Quality Assurance/Quality Control (QA/QC) activities virtually and they worked with the Energy Trust PMC to develop tools to conduct inspections remotely.

The pandemic also strained incentive processing resources at the PMC due to the increased volume of applications. The residential contractors were overwhelmed with work.

The electric utility staff also reported that the delays in incentive processing created significant financial hardship for contractors, as delays of 120 days were not uncommon. One staff member reported that the total payment amounts due contractors were \$100,000 to \$200,000 due to “snags on the contractors’ part and the volume of incentives.”

The Residential program staff acknowledged that these payment delays “made things really difficult. Some contractors have big money and don’t care, but it is frustrating for the other contractors who have lean operations... and may opt out of the utility program too.”

“The pandemic was unprecedented and necessitated changes” in program procedures according to one staff member from an electric utility.

³⁹ CLEARResult, 2021. “2020 Residential PMC Annual Report,” March p.70.

⁴⁰ CLEARResult, “Q3 2021 Energy Trust of Oregon Residential Quarterly Report,” p. 60

An unintended consequence of the pandemic was the elimination of in-person trade ally forums. The trade allies used to meet physically with Energy Trust staff, but with COVID, those meetings were replaced with virtual settings.

“I think the message sent out to the trade allies is that they are not as important. They have had almost no contact. Getting hundreds of emails is not an effective avenue of engagement.” (Electric Utility Staff)

Staff from one gas utility also noted that the “COVID pandemic threw a wrench in the cadence of meetings and interactions.” Many of the informal communications that would have occurred through impromptu meetings declined as the utility staff no longer met in-person with the Energy Trust staff.

“The informal sharing of ideas has slipped over the past few years.” (Natural Gas Utility Staff)

COVID Impacts on the CBOs

Most CBO staff did not recall any active involvement with Energy Trust during the pandemic. Most organizations shut down for a period during the initial pandemic but only one reported that Energy Trust reached out to see if they could provide any assistance. The CBOs focused on providing Personal Protection Equipment (PPE), food, and other necessities to their residents during the pandemic.

COVID Impacts on the Trade Allies

The participating contractors in the Home Retrofit program also reported that the pandemic created a “mixed bag” of opportunities. Of the 36 contractors interviewed, 21 mentioned that the pandemic affected their ability to get parts and materials for qualifying measures due to supply chain issues. These contractors either had to find alternative materials or wait up to six months until the products, such as windows or doors, were back in stock. Although Energy Trust offered increased incentives, these offers expired before the materials arrived for these projects.

The contractors also reported that the pandemic adversely affected their program operations, and several had to shut down for a limited time due to employee-related issues including not having enough employees, employees out sick, or having to reduce operations as customers did not want contractors in their residences. Contractors in Washington reported shutdowns if four months compared to two months in Oregon.

COVID Impacts on New Construction

The home builders faced similar challenges regarding finding employees who were willing to work during the pandemic. For example, one builder explained that one of his field workers took a “hard safety line” regarding the COVID-19 work rules and would then get into arguments at job sites where these rules were not being enforced. Other issues included scheduling difficulties as the builders wanted to minimize the number of employees on a specific job site. However, several builders reported that Energy Trust’s assistance with developing COVID-19 protocols helped them address safety concerns with their employees and subcontractors.

A few builders mentioned that they had to shut down or cease operations for a short time, especially in Washington.

One builder in a rural area explained that the construction did slow down as there were delays with permitting and some customers were worried about the increased prices of building materials. However, the builders in the rural areas did not provide any feedback on any Energy Trust activities as they could not recall them.

Several builders stopped work entirely during the pandemic due to the lack of materials, rising costs, and concerns about employee safety. These builders shifted their focus to developing land rather than building new homes.

Another builder observed that the pandemic also increased the overall cost of an energy efficient home by \$15,000 which creates further strains on customers. To compensate for the downturn in business, these builders are focusing on remodeling jobs to fill in the gaps until the supply chain issues are resolved.

The home verifiers reported less direct impacts from the pandemic, as they did not face any materials shortages. Their biggest concerns focused on having the proper PPE and following the mandatory health protocols. The verifiers reported that Energy Trust staff were also supportive and were happy to use PPE and aid with video conferencing as needed.

COVID Impacts on the Retailer Program

All in-person events were eliminated due to the pandemic, which included the retailer trainings. So, all the communications switched to virtual or online meetings and the implementation contractor tried to work proactively with the participating retailers and manufacturers. There was a slight dip in sales in April 2020, however the retail channel rebounded quickly. Energy Trust also increased its incentive levels in 150 stores to help spur customer demand, due to DIY shopping and customers using the pandemic as a time to complete home renovation projects.

Overall, the retail channel did not experience as much of a downturn as expected. Rather equipment delays due to supply chain interruptions became more significant in 2021.

“We've definitely seen water heater prices go up, but we really have fixed incentives for water heaters and appliances. So, we're not really able to do much on our side as far as the incentive to help with those supply chain issues.” (Implementation Staff)

The implementation staff also reported that some smaller hardware stores in rural areas closed permanently due to the pandemic, but the overall closure rate was less than they expected. Other stores had limited hours, and some shifted to curbside delivery. However, the “big box” stores rebounded quickly and developed a strategy of marketing LED bulbs next to the toilet paper as a deliberate way to increase sales of qualifying equipment.

3.11 Wildfire Response

3.11.1 Literature Review Findings

Energy Trust Residential program staff developed new offers for 2022 for homes and multifamily residences that are being rebuilt in areas damaged by the wildfires. Staff are exploring incentives that reflect an older building code than current code as the baseline for homes and businesses being rebuilt after the 2020 wildfires.⁴¹

Other Energy Trust activities focusing on Southern Oregon included:

- Developing marketing collateral folders for multiple programs to local jurisdictions to share with interested builders and homeowners.
- Worked with southern Oregon verifier to waive his builder fee with the support of the program for homes that are a part of the fire rebuild.

⁴¹Quarter Two 2021 Report to the Oregon Public Utility Commission & Energy Trust Board of Directors, August 13, 2021, p. 20.

- Conducted outreach and recruited multiple builders to become EPS New Construction trade allies; and
- Analyzed the effect of the adopted rule in response to the wildfires that went into effect January 1, 2021. Part of that ruling included *waiving a code requirement, modifying a code requirement, or accepting an alternate method, so long as it would not create an unsafe or dangerous condition regarding fire and life safety.*⁴²

The Residential PMC conducted outreach and support to trade allies during and after Oregon’s September 2020 wildfire events. Many trade allies were not directly affected by the fires but did respond to an increased demand for air filters due to rising concerns about air quality issues throughout the region.⁴³

3.11.2 Findings from In-Depth Interviews

Energy Trust Residential staff also worked with local communities to develop an offer that assisted residents in rebuilding homes damaged or lost due to local wildfires. The staff conducted outreach activities with local community stakeholders to discuss possible solutions. The PDC also tapped one of its employees who had assisted in California wildfire responses to help identify potential solutions. The Energy Trust team viewed this approach to shift and add resources as needed.

“The New Homes PDC had specific experience with wildfire response in California. And that really helped us be able to respond fairly quickly, or at least understand the dynamics that occur in communities that, you know, essentially, are destroyed by wildfire.” (Internal Program Staff)

The staff also looked for ways to provide funding to rebuild homes to be more energy efficient. They developed a strategy that created a different baseline for energy comparison purposes.

The electric utility staff also pointed out that Energy Trust provided analytical support to adjust the baselines for rebuilding homes in Washington after the wildfires and after flooding in mobile home courts.

“They were really good partners to have them out in the community, to talk about options, to help replace mobile homes, I know that is expensive and a long-term endeavor, but they’re really good in that arena.” (Electric Utility Staff)

Unfortunately, the wildfires displaced many homeowners, who then needed to find new homes. The fires also destroyed some local businesses. However, none of the manufactured homes retailers provided any direct feedback regarding the role of Energy Trust in mitigating these effects.

The home builders reported that the wildfires led to labor shortages, delays in building, reducing, or stopping work in several areas and increased concerns about air quality. One builder noted that lumber prices have increased which drove up the overall prices for newly built homes. Some builders had stocked up on building materials in advance of the wildfires such as lumber, windows, and garage doors to mitigate the rising prices of those materials.

Several home verifiers also experienced labor and material shortages due to the wildfires. However, the EPS PDC provided administrative support to some home verifiers as way to expedite the reporting process.

One verifier noted that the wildfires destroyed thousands of homes in his area, including a new subdivision that he was working on just before the outbreak of the wildfires. He was able to leverage his relationships with builders who were going to rebuild the homes to increase his overall business due to the wildfires. This home verifier also reduced his rates for fire victims who needed him to certify the rebuilt homes.

⁴² Energy Trust of Oregon, “EPS New Construction 2020 Annual Report”, TRC, p. 29.

⁴³ CLEAResult, 2021. “2020 Residential PMC Annual Report,” March, p. 87.

Another verifier noted that Energy Trust extended its deadline for rebate submissions for its New Construction Program due to the wildfire issues.

4. Documenting Marketing and Relationship Activities Findings

4.1 Communications

The findings regarding communications with Energy Trust residential staff, the PMCs and market actors were mixed.

Feedback About Washington Programs

Some Residential Staff explained that there is good communication between the PDC, the PMC and Energy Trust regarding the Washington programs. The Washington program staff reported regular weekly meetings with the PMCs to coordinate activities and to share feedback regarding recent customer interactions. The staff also passes on “warm leads” to the PMCs for follow-up.

“We have a standing meeting to just check in with the local field staff person. On the customer experience side, I’m in regular communication with other program staff, and we have a monthly meeting on Minority Women Owners as part of our trade ally outreach and strategy.” (Internal Program Staff)

“The biggest issue is when Energy Trust has meetings where they are making decisions, and the PMC doesn’t tell me about them...We need to know when it’s time for New Construction program staff to meet and how we would get a voice at the table.” (PDC Staff)

However, one program staff member admitted that the current minority outreach activities have not successfully engaged more minority contractors. This lack of engagement remains an ongoing concern, especially for the EPS – New Construction program.

Energy Trust staff indicated that there was a lack of communication between the Residential and Multifamily program staff. This miscommunication has led to misunderstandings about program offerings and missed opportunities, according to the program staff.

“It is challenging when each program is trying to determine what their incentive amounts might be the following year, and If they were not working together in lock step, one program may opt to change an incentive amount and not communicate that back to the other.... There are sometimes where we might find out last minute, like, through a conversation.” (Internal Program Staff)

Feedback from Utility Staff and NEEA

The electric utility staff reported having stood quarterly meetings to talk about collaboration opportunities and to coordinate with program offerings from Energy Trust, specifically focusing on aligning goals for heat pump installations and to coordinate strategies regarding contractor engagement.

One natural gas utility also reporting having quarterly meetings on various program issues and holding additional *ad hoc* meetings to discuss marketing activities, such as bill inserts.

The other gas utilities indicated they regularly have meetings several times a month to discuss various activities and maintain ongoing communications through emails. These staff reported that the communication level with Energy Trust was sufficient for their purposes.

NEEA staff work with several of the main contacts for Energy Trust’s New Construction and Manufactured Homes programs and report that the level of communication is satisfactory.

However, several utility staff reported it was difficult to identify the correct contact at Energy Trust due to perceived high levels of staff turnover and reassignment. One utility staff member said he “would love to have an organizational chart with the contact information” for the relevant Energy Trust staff.

Feedback from the CBOs

The 11 CBO representatives reported no difficulties in reaching the appropriate Energy Trust or PMC staff as needed. However, most communications were in telephone calls or in emails answering questions about project invoices. Several respondents expressed frustration that they were not notified when an Energy Trust offer had expired, which generated negative blow back from the residents.

The CBOs also suggested that Energy Trust should team with their organizations to develop joint messaging on the organizations' websites and other collateral materials to further promote their relationships in these local communities.

Feedback from Retailers

Most of the retailer respondents indicated that they had limited communications with Energy Trust, or the program implementation staff regarding retail program operations. One respondent explained, "Energy Trust is not very formal in developing business plans with stated goals" while others reported a lack of coordination with the local utilities in retail marketing and outreach. Several respondents also indicated that Energy Trust staff does not seek out their advice regarding program and market planning, even though these representatives work with similar programs on a national or regional scale.

Feedback from Home Builders

The home builders reported mixed feedback regarding the frequency and quality of their communications with the Residential program and PDC staff. Overall, only one home builder reported interacting with the Residential Account Manager on the New Construction program while five participants reported no interaction. Furthermore, one indicated that he has never interacted with the Residential or PDC program staff.

Two builders reported communicating regularly with Energy Trust and Earth Advantage staff while one builder noted, *"It would be nice to hear from someone once in a while."*

Several home builders and verifiers asked for a copy of the current Energy Trust organizational chart, given the "musical chairs" at the organization. Another respondent indicated that she had worked with four different account managers in four different years in the New Construction Program⁴⁴.

A few home builders noted that the number of builder trainings had declined significantly during the past ten years. These trainings also moved to Portland prior to the pandemic, which makes it difficult for the builders located in Southern Oregon to participate.

"The training was good because I could network at these events with other builders and architects. There is no outreach in southern Oregon— it is all in Portland." (Home Builder)

Feedback from Home Verifiers

The Home Verifiers also reported mixed feedback regarding frequency of their communications with Energy Trust and implementation staff. Three participants reported that they did receive timely feedback; three said they did not, and one was uncertain.

These verifiers also suggested increased training combined with monthly meetings as ways to improve the communication process. But one verifier described the relationship with both Energy Trust and the

⁴⁴ These are two examples of where the perception is not reality. These respondents do not distinguish between the Energy Trust and implementation staff, and therefore view changes in contact points at the PMC or PDC as staff turnover with Energy Trust.

program implementer as “musical chairs,” which makes it confusing for the participants to identify the right program contact.

4.2 Marketing Activities

4.2.1 Marketing Activities After the Restructuring

In addition to the internal restructuring of the Residential Program, the market activities were consolidated into a centralized Program Marketing Team which develops marketing materials for the Residential and Commercial Sectors.

According to program staff, the way the Residential program marketing team is organized now internally makes marketing easier because it is much easier for the marketing team to collaborate with all partners. Another benefit is that the central marketing team now has “purview over all of the marketing activities,” which makes it easier to deploy activities faster and “draw connections between the various marketing things happening around the program.”

Having a team dedicated to customer acquisition has allowed marketing to become more integrated.

“It is easier for me because if they're having management meetings, program design meetings, I tend to get invited to most of those and it makes the marketing strategy and planning significantly more proactive and comprehensive... And so that this new structure helps define ways in which the program goals are defined. It's allowed there to be better focus.” (Internal Program Staff)

However, the staff admitted that there are still some areas that have not been centralized, and therefore coordination of the marketing messages has been more difficult.

“...It sounds easy in theory, but it's hard to find individuals who can cover the variety of roles.” (Internal Program Staff)

Several internal staff members indicated that due to the restructuring and realignment, there has been an increased level of meetings required to develop marketing activities while there is not yet a “clear delineation” of responsibilities between customer acquisition and operations.

The retail program is another area of disconnection between marketing and implementation.

“The retail team only talks and thinks about retail goals, they're not worried about marketing goals or processing goals.” (Internal Program Staff)

Another staff member explained that “it’s difficult to know who is in charge from the marketing standpoint.”

“Not every program that we have gets a lot of attention.” (Internal Program Staff)

“How Washington fits in or if you've designed it in a way that Washington doesn't fit in well, then it sort of becomes problematic.” (Internal Program Staff)

The PDC staff provided additional examples of the types of delays they experience in getting marketing materials created in a timely manner for the New Construction program.

“Energy Trust has a lot of people and are not able to make quick decisions. There are budget and staffing constraints...It is a very long process...Marketing has the most cooks in the kitchen.” (PDC Staff)

Contractors/Trade Ally Team Outreach

The PMC staff support Energy Trust in contractor outreach activities, including fielding calls from residential customers and assisting with trade ally initiatives. The PMC also has dedicated staff in Eastern

Oregon who coordinate trade ally outreach activities for contractors and homeowners located in that part of the state.

The goal of this outreach is to make sure that the local community organizations, contractors, and utility customers are aware of the programs and resources available to them.

Feedback from the Utility Staff

The utility staff reported meeting monthly with Energy Trust to coordinate on marketing activities including marketing messages, program design issues, delivery, savings, and reporting on all the program offerings.

The utility staff also coordinated marketing activities to promote smart thermostats through targeted email campaigns. Staff from both electric utilities reported that the targeted email campaigns with Energy Trust were very successful at reaching customers.

Energy Trust staff also coordinates marketing activities with Clark Public Utilities and NW Natural on specific gas offerings.

“We will offer gas incentives in Clark County for gas-heated homes and coordinate with NW Natural on the direct installations of smart thermostats. We set up an arrangement and got reimbursed through Energy Trust.” (Electric Utility Staff).

Staff from another electric utility mentioned that Energy Trust was working on a dual marketing approach to promote incentives for smart thermostats and focusing on enrolling customers in Demand Response (DR) programs. Utility staff reported that they have been successful in aligning the marketing messages and have more “fully integrated” incentives between Energy Trust and the electric utility.

But staff from one electric utility indicated that the dual marketing approaches are confusing to the customer, as “we are both trying to reach the same customer base with [the] same messaging, [which] can be confusing. We are offering the same exact thing and it feels strange to the customer getting [the] same messages about two things from two different entities.” (Electric Utility Staff).

4.2.2 Alignment with Marketing Activities from Energy Trust

Manufactured Home Retailers

All three respondents reported regular and positive communication with the program implementer even though they do not receive supporting marketing materials from the PDC.

Retrofit Trade Allies

Slightly more than one-half (55%) of the participating contractors reported using Energy Trust marketing tools, with “Find a Contractor” as the most frequently mentioned. However, a few contractors indicated they would like their listing updated. Only 10% of the contractors reported using Spanish-translated program materials from Energy Trust’s website. Most contractors reported being happy with their account managers, calling them “accessible and responsive.”

Home Builders

Most of the participating home builders do incorporate the Energy Trust logos into their marketing materials. However, one builder said that the marketing could be “more relevant to the younger residents,” while two others wanted Energy Trust to develop materials for social media platforms.

The most effective marketing strategies for these home builders has been to use their website and social media accounts, but overwhelmingly most of their leads are from word-of-mouth from previous

customers. Another home builder works with local realtors and lenders to promote his business in the community.

Several respondents mentioned using the builder incentive cards⁴⁵ and the verifier handbook to review program requirements with their customers. One builder developed online versions of these materials to post on the company website.

Home Verifiers

Most of the home verifiers do not use any Energy Trust marketing materials. Their services are also too technical for the average homeowner to understand as well. Instead, these market actors focus on reaching out directly to the home builders to promote their services and they indicated that the builders use the EPS Score Card to explain the program to their customers.

4.3 Effectiveness of New Outreach Strategies to Community Organizations

4.3.1 Outreach to Community-Based Organizations

Energy Trust also created the Diversity, Equity, and Inclusion (DEI) goals and the residential sector used its new structure to achieve/pursue the goals set by Energy Trust. Specifically, these goals are to reach out to CBOs and develop programs that help address historical inequities in Energy Trust's outreach and service to certain communities. These new activities included cultivating relationships with representatives from various CBOs and developing tailored offers with larger incentives for residents with low incomes, those living in rural areas or from communities of color.

As the program staff explained, the outreach to these CBOs provided a way to include DEI issues as part of the customer acquisition process. The team is "focused on how to do that in an equitable way" by developing a more integrated approach.

"The State of Oregon is one community made up of thousands [of] smaller communities, and we can't possibly be experts in all of them.... you build relationships, and that's kind of where our focus has been, is creating new relationships with people who are experts in different communities." (Internal Program Staff)

"...I'd say that we have a really good structure that's working well. And we've been trying to hold these relationships close to the vest and keep them and make sure they're important for us." (Internal Program Staff)

But some outreach activities have received push back from the community-based organizational leaders, especially when the contact has been passed to the PMC. Instead, several Residential program staff want Energy Trust to manage these relationships directly rather than passing them off to the implementation contractors.

"In some cases, they want to talk to an Energy Trust staff person, not a PMC staff person...Some in the minority community who maybe felt like they were being handed off to somebody else to continue developing the relationship was... it came across as being disingenuous." (Internal Program Staff)

The PMC staff also explained the difficulties associated with trying to engage CBOs. More than one-half of the CBOs felt that Energy Trust came to them assumptions regarding the energy burden within the communities and ready-made solutions. But the CBOs were concerned that these offerings did not match the realities facing these communities. For example, the Energy Trust staff pushed for offerings that did not include address homes with heating oil/propane. Furthermore, several CBO staff wanted Energy Trust

⁴⁵ The respondents were referring to the [EPS New Construction Solutions - Energy Trust of Oregon](#).

to focus on improving the housing infrastructure with remediation support, rather than focusing only on energy efficiency upgrades.

As one staff member explained, a shift occurred “without understanding how Energy Trust affects their burden.” However, the PMC further explained that in working with the CBOs, Energy Trust has been able to develop more DEI funding (community) opportunities that are not as “one-dimensional” as they used to be.

4.3.2 Feedback from Utility Staff

The electric utility staff believe that their organizations are aligned with Energy Trust on policy goals, such as equitable distribution of benefits and addressing DEI issues. But the staff also pointed out that the community organizations may be reluctant to participate, particularly if there are no contractors or trade allies located in these areas, so the Energy Trust may not be able to adequately serve their communities.

“We haven’t been able to tap into underserved markets. It is a very good opportunity for us to (reach) faith-based organizations but it has not traditionally been effective. We have not had success in engaging or identifying local actors and significantly ramping up participation.” (Electric Utility Staff)

4.3.3 Feedback from Community-Based Organizations

The ten community organizations interviewed for this evaluation provide a range of services, however very few organizations targeted renters for energy efficiency improvements. The community representatives indicated that they faced challenges with getting landlord approval for making property improvements.

Enrollment Process

Most CBOs connected with the Energy Trust staff through their work on energy issues in the Portland area or through participation in previous Energy Trust program offerings, such as the home energy assessments or incentives for specific measures.

Program Operations

Although most of the respondents reported favorable relationships with Energy Trust and PMC staff, many felt that the Energy Trust staff delegated their community outreach activities to the PMC, rather than becoming directly involved with each organization. The respondents indicated that Energy Trust staff are accessible and available, as needed.

While the CBOs appreciate the funding opportunities provided through the Energy Trust, several remarked that the incentive programs were not suited to the communities they serve. These organizations focus on assisting the most vulnerable residents, who are often low or moderate income and are faced with high energy burdens. Most Energy Trust program offerings require customers provide a co-payment to participate in the program; however, even co-payments are beyond the financial capabilities of many residents. The CBOs described Energy Trust’s programs as severely disconnected from the realities of these low-income customers.

A few viewed incentive programs as “classist” as they assumed that the residents have the necessary income to make remediations to the housing stock before participating in the Energy Trust programs. Instead, the staff at these CBOs look for grants and other funding sources to pay for these needed improvements before enrolling in an Energy Trust program offering.

“They don’t understand if you have no money, you can’t get an incentive.” (CBO Staff)

Another respondent observed that many of its clients in the rural areas are still using oil or propane to heat their homes, as they cannot afford to upgrade to either electricity or natural gas.

The respondents want Energy Trust to offer grant programs instead of incentive programs, as those are more appropriate for their clientele. They also viewed Energy Trust as too cautious and bureaucratic in developing program offerings.

“The organization seems to operate under a ‘culture of fear’ to really step out and boldly serve the communities they target.” (CBO Staff)

“Often the process takes too long and too many eyes and okays are needed to move forward.” (CBO Staff)

The respondents also believe that the issues are magnified because the Public Utility Commissions are unaware of the challenges that these organizations, and the communities they serve face.

Community Engagement

The CBO staff also indicated that while they are aware of the Energy Trust programs, most of the local residents are not. The residents were most familiar with LED lighting promotions co-sponsored by the community organization and Energy Trust.

Several respondents noted that working with Energy Trust had led to some positive outcomes, including expanding opportunities for minority contractors to work on Energy Trust projects. However, most believed that much more work needed to be done regarding workforce development and community outreach for these initiatives to be successful long-term.

Data Tracking and Reporting

Most CBOs said that the Energy Trust’s reporting requirements were inconsistent across Energy Trust programs. Specifically, the reporting requirements differed across Energy Trust programs and varied based of feedback from Energy Trust Staff. Some CBOs were required to just provide a monthly telephone call, while others CBO staff had to generate invoices and written monthly reports. Several suggested that since they are involved in multiple Energy Trust programs that would be easier for them to use a standard reporting template that would include the Energy Trust programs.

5. Identifying Gaps in Program Delivery

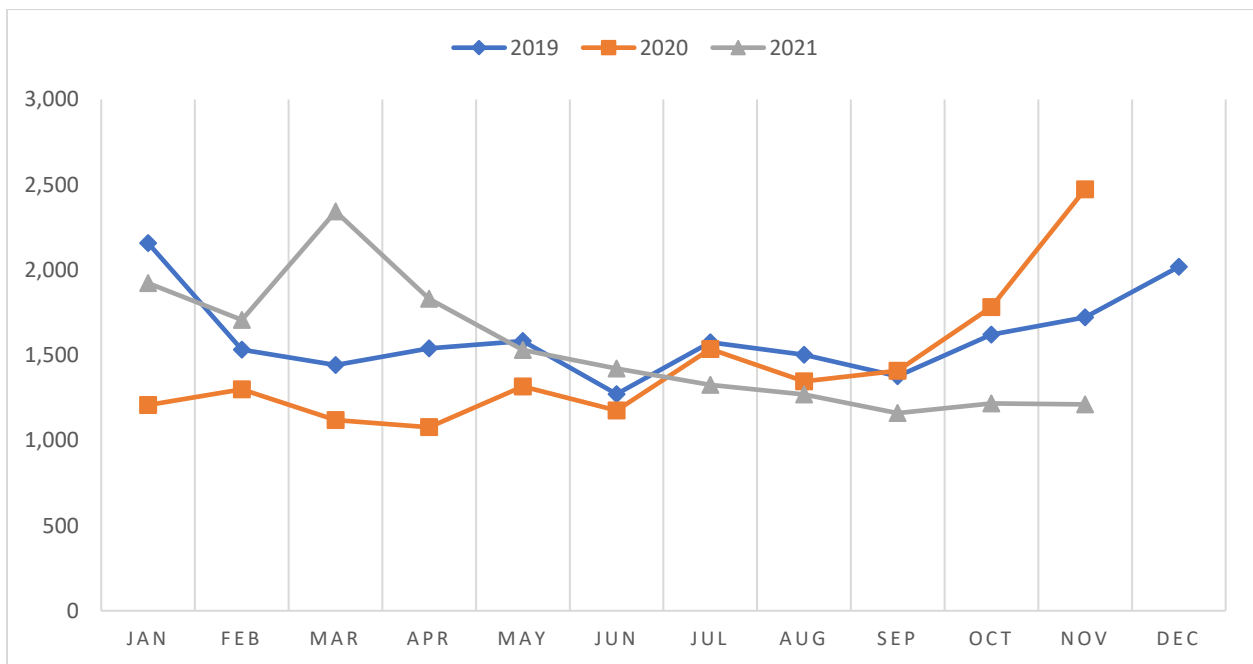
5.1 Problems with Contractor Application Processing and Invoicing

The 2021 Program Implementation Manual provides a complete description of the requirements that must be met for contractors to receive their incentives. The manual also establishes the Service Level Agreements (SLAs) for the time it should take for incentive processing under a variety of scenarios. In general, invoices are processed weekly, and the checks are processed twice a month.⁴⁶

5.1.1 Literature Review Findings

A review of the monthly reports for the past three years revealed that application processing times were significantly delayed for several months. As Figure 4 illustrates, monthly volume is down the last few months relative to other years; last December and the first few months of this year saw high volume due to bonuses offered in those months.

Figure 4: Residential Program Application Processing Activity 2019-2021



Due to the increase of application volume throughout 2021, the Residential PMC has not been able to adhere to current service level agreements (SLA) (see Table 7).

⁴⁶ CLEARResult, 2021. "2021 Program Implementation Manual," September, pp. 63-64, 386.

Table 7: Percentage of Applications by Quarter Within and Outside of SLA Parameters

Recognized Year	Recognized Quarter	Percent within SLA	Percent outside SLA	Meets 90% SLA
2019	1	96.48%	3.52%	yes
2019	2	98.45%	1.55%	yes
2019	3	99.06%	0.96%	yes
2019	4	94.67%	5.33%	yes
2020	1	97.26%	2.74%	yes
2020	2	98.08%	1.92%	yes
2020	3	91.50%	8.50%	yes
2020	4	39.06%	60.95%	no
2021	1	27.85%	78.18%	no
2021	2	25.31%	80.50%	no
2021	3	29.03%	71.01%	no
2021	4	65.04%	35.01%	no

Further compounding this issue was the increased number of reversals due to contractor error. Most of these corrections were with one HVAC trade ally, however, these delays have created a ripple effect across the entire program.⁴⁷

5.1.2 Findings from In-Depth Interviews

Application processing times have increased in the past two years due to the increased volume of applications submitted during the COVID-19 pandemic combined with staffing shortages among contractors.

“There have been an enormous number of applications coming in, more so than they would see in a regular year. It has been a three-fold increase in applications where the number of applications [for a particular measure] used to be 100, there are now 300, during the same time period.” (Internal Program Staff)

The surge in applications also increased the number of corrections required to process these applications, as either the participant or the contractor incorrectly completes the application. Common errors include:

- Paying the incentive to the wrong individual;
- Errors in the address; and
- Applying for an incentive for the wrong or ineligible measure.

In one quarter, there were 172 reversals or corrections that needed be made. If the check “goes stale,” and is not cashed by the program participant, then Energy Trust must return the funds to the state within a three-year timeframe.

Overall, these application errors account for 3% of all applications processed, but the staff believed this is not viewed as a high priority, even though application processing is labor-intensive.

⁴⁷ 2021 Residential PMC Monthly Report, November, p.27

“Corrections are labor intensive and even if it's just a small percentage of the overall project scope.”
(Internal Program Staff)

The delays in payment processing also create additional challenges for the contractors. The utility staff and trade allies described the problems that delayed invoices have caused for their businesses.

Smaller contractors, especially those in rural areas, reported significant hardships from the delays in application processing. They do not have the administrative staff to process these applications multiple times, and without an online application process, it just creates another burden for these contractors.

“We have had some complaints from rural contractors often on when a (PDC staff member) is on board, but we've worked through that specifically in southern Oregon.” (Internal Program Staff)

“We have contractor complaints..., on delayed payments. One of the strategies that we use is instant incentives, that pays the contractor directly. So, when we're delaying the (payment) to three months out, those contractors don't have the upfront capital (to fund those delays).” (Internal Program Staff)

The contractors identified two major issues with the current application process:

- **Difficult to submit application:** Multiple contractors described the difficulties of completing applications for rural customers, including long drive-times, lack of Internet access to receive the materials online, and then getting a lower trade ally rating when the paperwork is not completed successfully. It is also difficult to get the customers’ signatures digitally, so the contractors must drive back to the client to get all the forms filled out correctly.
- **Different changing forms for rebate applications:** Another area of contention for contractors is that the rebate forms change frequently⁴⁸ which leads to additional processing errors. The applications also lacked clear descriptions about the measures that must be installed together, such as underfloor insulation and attic insulation.

“We didn't know there was a different form for the heat pump. We want a clear guideline for contractors to see what forms to use.” (Contractor)

- **No information regarding the status of a submitted application:** Several contractors complained that they didn't know that their applications were incomplete, as the only notification they received was to have the application declined. However, several contractors pointed out that they were unaware that the applications were delayed due to errors, and one said that the application was delayed even though all the required signatures were on the form.
- **Delays in payment processing which causes significant financial hardship for the contractors.** One-third of the contractors reported delays in receiving the incentive or rebate payments from the Energy Trust, ranging from two to six months. One contractor was owed \$2,500 while another said that the Energy Trust owed \$100,000, but it had been delayed so long due to internal staffing issue that the company has written off \$40,000 in incentive payments they were supposed to receive. Another contractor estimated that 25% of his billings were delayed, up to \$14,000 due to staff turnover during COVID-19. Ultimately, the applications were submitted past the deadline, and he had to absorb the losses from the “Instant Incentives” he provided upfront to customers. These contractors tried to resolve these payment issues unsuccessfully and now three have opted to drop out of the program entirely.

⁴⁸ The forms may not change frequently, but several contractors indicated that they are not active in the program, and so may be reflecting on changes that occur year-to-year.

“Paperwork has been lost; it didn’t use to be before...Rebates have been lost for 6 months. We have to resubmit another one, sometimes things are 11 weeks out if we prompt them [ETO] 4-6 weeks would be reasonable.” (Contractor)

“Instant incentives were popular with customers, but we had to wait two-three months for paperwork...It has taken a lot of staff time to keep up with it.” (Contractor).

Overall, the home builders reported fewer delays in payment processing, but a few mentioned delays of three to five months, even though the incentive payment process is different for the new construction program. A few builders also wanted status updates regarding their applications or a move to online submissions to reduce these delays.

“Sometimes it’s not clear what the status of a submitted project is due to the length of time to get a check.” (Home Builder)

Several CBOs also reported concerns with the delayed payments to both their organizations and the participating contractors

5.2 Challenges in Serving Customers

Challenges in Serving Rural Customers

The process evaluation focused on identifying the specific challenges associated with delivering programs in rural communities. The specific barriers that create challenges in working with customers in these communities:

- **The lack of qualified contractors that serve these areas**, which limits the overall effectiveness of the Energy Trust’s program offerings. The participating contractors who serve rural communities also cited the difficulties they had in terms of reaching customers, often a two-hour drive, a lack of WI-FI, which complicates application submission, and a lack of understanding about the specific needs these customers face.
- **Program constraints that limit participation:** Like the issues raised by the CBO staff, many contractors reported that the Energy Trust’s program offerings are too inflexible to meet rural customers’ needs. Too often, these older homes need remediation work, which these rural and elderly customers cannot afford. Therefore, they are not able to participate in the Energy Trust program, regardless of the incentive amount available.

Challenges in Serving Communities of Color

The Energy Trust acknowledged that enrollment of Minority/Women Owned Businesses in the Trade Ally Network remains low. For example, of the 36 trade allies interviewed, less than one percent were Minority/Woman-Owned businesses.

“We have a need to advance our strategy in incorporating more emerging businesses and minority owned businesses to work in our Trade Ally Network. Our focus has not been on workforce development in the same way that it’s been on savings acquisition.” (Internal Program Staff)

Energy Trust’s marketing approaches have evolved as the staff explores new ways to reach customers in communities of color. The focus has been primarily on building trust with the local communities, but as staff noted, this approach requires patience. The program staff noted that they are working with new companies who have the expertise to develop successful engagement strategies for these communities that have been underserved by Energy Trust, especially those for whom English is not their first language. But the staff agreed that current marketing efforts need to be updated to better reflect the needs of these new audiences.

However, the interviews with the program staff and CBOs identified several areas of ongoing difficulties.

- ***The need to modify the marketing messages and delivery to better engage communities and their residents.*** The program staff have been working with new companies to enhance their outreach to communities. Other tactics include reaching out to community leaders and leveraging the social media campaigns with “micro influencers.”

But several members remarked that there is a lot of work left to be done to increase the diversity and accessibility of Energy Trust’s marketing and outreach materials. Few materials are translated into Spanish, despite the large concentrations of residents who do not speak English as a first language.

Adding in the CBOs focusing on DEI issues makes program delivery even more complicated according to the electric utility program staff.

“Delivering in Klamath Falls Oregon has always been tough, but delivering to diverse populations in Klamath Falls, Oregon just gives you additional things that you need to do and does add on some challenges to just getting out the door.” (Electric Utility Staff)

Several program staff members also described these outreach efforts as ineffective because they are being delivered via silos rather than as a holistic approach that reaches across all Energy Trust program areas.

“Communities of color, we haven't done a great job serving them, and I don't think that our program silos will help get there.” (Internal Program Staff)

5.3 Challenges with SW Washington Programs

Several program staff indicated that the Energy Trust programs operating outside of Portland are “disconnected” with the other program offerings. Specifically, one staff member explained that the EPS, Retail Program, and the programs offered in Southwest Washington seem to be separated from the other Energy Trust programs.

“These programs seem to live in a bubble...the coordination across those things is limited.... It is not top of mind.” (Internal Program Staff)

The Washington program offers focus on a limited number of gas measures and the staff described it as a “very different beast” from other Energy Trust programs.

“Customers in Washington have a different utility relationship, the opportunities and challenges are different, the regulatory structure, the size and scale and amount of money is not divided in the same way.” (Internal Program Staff)

“We suffer from not having any direct program verifiers that serve the region, which is the model that the program has historically used in the past, is, find somebody who wants to be the verifier on these projects. And it continues to be a problem (and) why we're not getting more projects, so, I hope some of these workforce development things kind of bring that through, but it has been a continual challenge.” (Internal Program Staff)

This disconnect creates challenges in developing marketing and communications pieces for these programs, which are not driven by specific program goal. The goal is to raise program awareness, which is different from the other program savings goals for other Energy Trust offerings.

“It's like, oh, and what about Washington? It just gets tacked on at the end on the conveyor belt.... But when you start talking about Washington, and if Washington isn't included in some of this higher-level planning...we have to sometimes go back and address it.” (Internal Program Staff)

5.4 Website Issues

Both staff members and trade allies criticized the way the current website is set up, as they believe it is difficult to navigate for both contractors and customers. Although the focus on the website is on energy efficiency, it also includes information about solar programs as well, which are not as intuitive to the residential customer visiting the website. Rather, as one staff member explained, the website reflects Energy Trust's current internal sector rather than set up to provide residential customers with information about energy-efficiency projects.

"The way that we have our programs set up is extremely valuable, because it allows us to have a pretty significant depth of knowledge in a particular market segment. That allows us to really understand that segment and have outreach coordinators, who are super-focused on those particular customers, But it doesn't necessarily reflect what the customers' needs are." (Internal Program Staff)

Several staff members are concerned that the current website will make it even more difficult for rural customers to understand how to access programs, such as the wildfire recovery response. As these staff members observed, the Energy Trust is reaching new customers in rural areas and through CBOs, but the website is not easy to navigate for these new customers.

"It's just a different kind of customer or the community-based organization who's serving their constituents. We're definitely not ready for that kind of customer. We have to develop our website to explain programs and we have to be a lot more holistic in our approach." (Internal Program Staff)

5.4.1 Website Updates Post-Evaluation

Concurrent with the process evaluation research activities, the marketing team began updating the website and related program materials. These modifications addressed many of the concerns raised by program staff during the in-depth interviews. These changes and adjustments included the following:

- The [Residential Home Upgrades and Incentives](#) landing page and all associated product pages were redesigned in summer 2021. The new web pages officially launched in conjunction with a territory-wide advertising campaign in late summer 2022. Energy Trust's DIY page also launched in conjunction with these pages and offers a new, education and learning-based content experience.
- The new pages were redesigned based on user testing the Energy Trust web team conducted with homeowners, representative of our Residential target audiences.
- The post-launch process has included additional user testing with Residential customers who represent the intended audience for the site. Feedback from this testing is still being compiled into a final report, but the feedback has been largely positive, indicating that the new user experience is satisfying the needs of the website's primary target audience (Residential homeowners and renters).
- Since the launch, the web team has continued to collect feedback on the website from both internal staff and external stakeholders (primarily trade allies via program representatives).
- These stakeholder groups have expressed some frustration with the new design for a variety of reasons. This feedback is being documented and the web and marketing teams are developing solutions to address their concerns and further optimize the user experience for secondary (e.g., staff and trade allies) and tertiary (e.g., third-party organizations) users.
- The web optimization process will continue over the course of the year and beyond.

5.5 Areas for Program Improvement

All the interview respondents offered suggestions to improve the current Energy Trust offerings. This section summarizes the most frequently mentioned topics across all interview groups.

5.5.1 Improving Current Measure Offers

- **Align the Energy Trust offers to better serve under-served utility customers.** Program staff, utility staff, and the CBO leaders all wanted the Energy Trust program offerings to be more flexible for non-traditional customers. As these interview respondents observed, the low-income and rural customers may not have the financial resources to make needed home improvements before even considering an Energy Trust program offering. Utility staff members observed that currently, rental customers have limited options for energy efficiency improvement, especially gas customers. A clear take-away from these interviews was that Energy Trust need to develop more flexible program offers that go beyond simple incentive programs for energy efficiency improvements.
- **Consider expanding the list of available gas measures, especially in rural and DEI communities, to include energy efficient gas furnaces.** Staff from several gas utilities believe that Energy Trust no longer is focused on gas measures, even though energy savings opportunities still exist, especially in low- and moderate-income households. For example, one gas utility staff member noted that there are tremendous savings opportunities for replacing gas furnaces in rental housing, but that is not an area they have been able to work on with Energy Trust.

Another gas utility staff member mentioned that over the years, the number of eligible gas measures has declined as the cost-effectiveness and value proposition changed for these measures.

“The Energy Trust moved away from gas furnaces as they determined that the majority of furnaces don’t need to be incentivized.... Once that decision is made, the Energy Trust staff don’t revisit it...they don’t get rid of very many electric measures but there are thousands of homes with inefficient gas equipment. It feels like a disconnect.” (Natural Gas Utility Staff)

Gas utility staff also pointed out that there are thousands of homes in the Portland area that have inefficient furnaces, but they are not eligible for incentives from Energy Trust. The utility staff member further indicated that contractors have the data showing the potential for replacing aging gas furnaces. The focus away from gas furnaces is a “misalignment” with the gas companies’ goal to reduce overall energy usage.

- **Expand Do-It-Yourself (DIY) options:** Several program staff members recalled previous successful campaigns that promoted self-installs of energy efficient equipment such as heat pump water heaters. This offer included a high rate of QA/QC activities to verify the installations and the associated energy savings.
- **Revisit the incentive amounts paid to customers for Energy Trust offerings:** The verifiers indicated that the incentives for energy efficient homes are not sufficient to encourage energy efficient new homes in rural areas, where the construction costs are significantly higher. Similarly, several contractors indicated that incentives for HVAC systems were simply too low to justify their time to make those recommendations.

5.5.2 Community Outreach and Engagement

- **Energy Trust staff should work proactively to engage directly with the leaders in the CBOs on a regular basis, rather than outsourcing communications to the PMC.** Several program staff emphasized that the relationships with the CBOs should be viewed as strategic partnerships that

involve the highest level of interaction with Energy Trust staff. Once these relationships have been developed, then the Energy Trust staff can delegate the programmatic details to the PMCs. However, developing the offers and realigning them to the needs within a community must be done with the full engagement and collaboration of senior Energy Trust staff.

- **Provide utility and PDC staff with updates regarding meetings within their communities.** Both utility and PMC staff were surprised to learn that Energy Trust staff were holding meetings in their communities, especially since these individuals were the “point-people” for many of these initiatives. Specifically, the PDC staff want to be alerted whenever Energy Trust or PMC staff meet with local builders or verifiers, to ensure that the information communicated to these organizations remains consistent. The utility staff would also like to know when Energy Trust staff engages in discussions about Community Energy Plans in the localities that these utilities serve.

“We are not getting any notice on community energy plans.... The elements of an energy plan are really difficult for a utility to deliver on, so the earlier the involvement, the better.” (Electric Utility Staff)

- **Evaluate the current communications pathways used to reach critical market actors.** Feedback from the contractors and retailers suggested that they only have minimal interactions with program staff on a regular basis. Similarly, market actors in the New Construction Program also reported sporadic communication with Energy Trust or PMC Staff. Staff from the utilities would also like to have more frequent, formal meetings to improve overall program marketing, rather than meeting semi-annually.

5.5.3 Contractor Support

- **Develop a new and improved online portal for contractors.** The delays in application processing reinforced the need for the market actors, especially the installation contractors and the CBOs, to be able to track the status of incentive payments. Although the program staff explained that the previous contractor online portal was ineffective, several believed those issues were more related to the IT capabilities and its implementation rather than a lack of interest among contractors. Program staff suggested developing a simpler self-service option that would provide status updates of submitted projects.

“Whatever would need to be built should be more functional and rolled out in a very comprehensive way with a lot of buy-in upfront from the trade allies on how they would use it and what is served, what purpose it would serve.” (Internal Program Staff)

- **Provide a consistent rebate application portal online:** Several contractors noted that some rebate applications are allowed to be submitted online, such as the New Construction program, while the Retrofit Program applications must be scanned and sent via email or regular mail. Moving to a consistent rebate processing portal would eliminate current program bottlenecks and improve the application processing overall across multiple Energy Trust market segments.
- **Offer more contractor training opportunities in-person and in locations outside of the Portland metropolitan area.** Both contractors and verifiers requested more training opportunities with Energy Trust staff. These contractors also wanted to expand beyond traditional HVAC issues to include training on code changes, and changes in the Energy Trust program offerings. One contractor suggested developing a mentoring program that would encourage new contractors to participate in these programs, especially in communities that have been underserved by Energy Trust.

- **Streamline the Contractor Onboarding Process.** The New Construction PDC wants the onboarding process for builders simplified, as it currently takes more than one month for a builder to successfully enroll in the program. Energy Trust’s current process approves allies in “batches” which creates delays and sometimes confusion among the interested builders and contractors. Although both Energy Trust and the PMC are looking at strategies to accelerate the approval process, it is still a cumbersome process for both the PDC and the allies.

5.6 Assessing Future Program Solutions

The respondents also shared input regarding new energy efficiency technologies and approaches that should be considered in future program offerings. This section summarizes the most frequently mentioned ideas.

5.6.1 Incorporate Non-Energy Benefits in MADs

- **Several program staff members suggested considering including the non-energy benefits associated with energy efficient equipment when developing new MADs that may directly benefit under-served populations.** Specifically, the staff believe that certain measures, such as air conditioners may lead to significant health improvements for those individuals suffering from severe medical conditions, such as Multiple Sclerosis. Although these direct benefits may only accrue to a small part of the overall population, other Non-Energy Benefits such as improvements in health, comfort, and safety have become widely recognized across multiple jurisdictions. As one program staff member pointed out, these types of measure offerings are exactly aligned to Energy Trust’s over-arching goals.

“I think we have this clear and compelling opportunity to marry energy efficiency with other critical social and environmental benefits. We’re not doing it because we’re afraid of doing it another way that doesn’t conform with how we would typically run large scale, statistically significant impact evaluation.” (Internal Program Staff)

5.6.2 Expand Electric Program Measures.

- **The electric utility staff want to continue to work with Energy Trust on coordinating joint offers that promote new technologies including:**
 - Continued promotion of heat pumps as an alternative to electric furnaces.
 - Coordinating activities to promote Demand Response (DR) programs that include water heaters with smart water heaters controls.
 - Offer heat pumps for multifamily applications.
 - Jointly coordinating a battery storage program.
 - Offer rebates for furnace replacement to low-and-moderate income houses as part of the DEI outreach.
 - Focus more on making “deep energy retrofits,” especially in underserved communities; and
 - Partnering with NEEA to promote heat pumps for older homes.
- **Consider Additional New Technologies:** The respondents also identified emerging new technologies that may be worth considering in the future. These *technologies* include:
 - Coordinating with NEEA to commercialize “thin triple windows” which are a triple-pane window in a double pane configuration that would keep the current wall systems but promote a shift to more energy efficient windows; and
 - Consider adding more electrification measures including dehumidifiers and EV chargers in future program offerings.

6. Conclusions and Recommendations

6.1 Research Objective #1: Summarizing Program Operations

Organizational Restructuring

- ***The organizational restructuring created some opportunities for economies of scale, but also highlighted the siloed decision-making that still exists within Energy Trust.*** Positive outcomes from the restructuring included:
 - More specialization for specific tasks among Energy Trust staff.
 - Increasing opportunities to coordinate in new ways with both internal and external program staff.
 - Improved data management capabilities.
- ***But the restructuring also created some disconnects including:***
 - Created a bureaucratic decision-making structure which requires multiple approvals and leads to delays in creating time-sensitive marketing materials.
 - Identified a “missed opportunity” as it did not address ways in which the Multifamily and Solar programs could better align program offerings with the Residential program.
- ***Energy Trust Residential program staff have developed productive relationships with the electric utilities and NEEA program staff.*** They have good relationships with gas utility staff as well, although some gas utility staff question Energy Trust’s commitment to promoting gas measures. Specifically, gas utility staff believe that the incentive structure is too low for these measures, further limiting the participation of their customers.

Market Actor Satisfaction

- ***Overall, the market actors working with Energy Trust reported relatively high levels of satisfaction for both the Residential program and the Energy Trust staff.*** However, the home builders provided the lowest average scores while the CBOs and contractors provided the highest ratings.

Impact of COVID

- ***Energy Trust staff worked proactively to limit the impacts of COVID-19 on program operations by providing Personal Protective Equipment (PPE) to trade allies and developed bonus and incentive offers to support the building trades.*** But Energy Trust could not develop an effective approach to adapt to the increased cost of materials thus limiting the effectiveness of its Fixed Price Promotions (FPP).
 - The promotions and bonuses created unintended consequences of a flood of program applications.
 - Disruptions to the supply chain led to shortages of qualifying measures ranging from HVAC equipment to new manufactured homes.
- ***Some trade allies felt more disconnected from Energy Trust when the meetings switched from in-person to virtual discussions.***

Impact of Wildfires

- **Energy Trust staff developed a creative solution to encourage home rebuilding after the wildfires.** The staff worked with PDC experts and developed an alternative baseline code to facilitate rebuilding of homes damaged or destroyed in the wildfires. Energy Trust staff also expanded its deadlines to accommodate delays experienced by home builders and verifiers due to the wildfires.

6.2 Research Objective #2: Documenting Marketing and Relationship Activities

Communications

- **Perception is not always reality.** Feedback from the market actors suggested they did not always have a full understanding of the Energy Trust’s staff’s motives or intentions. This lack of understanding led to negative feedback regarding some staff interactions as illustrated in the following examples:
 - Energy Trust needs to improve its education and outreach to further illustrate the benefits of energy efficient products.
 - Respondents from the CBOs, utility staff and building trades were frustrated at the high level of perceived staff turnover with Energy Trust and the PMCs, since their direct contacts changed frequently.
- **Internally, Energy Trust staff remarked on the low level of communication regarding the development of new offers that could apply to multifamily and solar residential segments.** This miscommunication has led to misunderstandings about program offerings and missed opportunities.
- **The CBOs and contractors were frustrated about the lack of notification when offers from Energy Trust are no longer applicable.** Both respondent groups received negative feedback from these potential customers, with the CBOs receiving negative blow back from local residents.
- **The retailers, distributors, and manufacturers want to be more proactively engaged in long-term promotions.** They could offer regional and national expertise that could directly benefit these energy efficient equipment promotions.

Marketing Activities

- **The Residential program staff coordinate their marketing and outreach activities with electric utility programs.** The program staff worked jointly on multiple campaigns and explore innovative dual marketing approaches, such as enrolling customers in Demand Response (DR) programs. But sometimes these campaigns were confusing to the customers as these distinctions are not well-defined.
- **Most market actors are aware of the Energy Trust materials.** However, most contractors are not aware of the Business Development Funds that are available to them.
- **Washington Programs are often overlooked in developing comprehensive marketing approaches, as they are viewed as “add-ons” to the overall Energy Trust activities.**

DEI Activities

- **Energy Trust has developed relationships with the CBOs.** However, most interactions focus on administrative issues rather than longer-term strategic planning.
 - Some CBOs feel that they are being “handed off” to the PMC rather than treated as an equal partner with Energy Trust staff.
 - Several CBOs are frustrated with the lack of programs available for their customers, as there is a significant misalignment of program offers to the capabilities of the residents in communities underserved by Energy Trust.

6.3 Research Objective #3: Identifying Gaps in Program Delivery

Application Processing

- **Processing of rebate applications experienced the “perfect storm” of unanticipated volume from contractors coupled with shortages of trained PMC staff who could complete the applications properly.** These factors led to significant delays in processing the applications in a timely manner.
 - Contractors and CBOs reported application processing delays of several months which led to significant financial hardships, especially for smaller contractors located in rural areas.
 - Energy Trust did not extend its deadlines for application submission, which meant that several contractors had to “write-off” tens of thousands of incentives they had already given customers through “Instant Incentive” offers.
 - Despite contractor complaints, these issues were not addressed as these applications represented only 3% of the total volume. But several contractors are leaving the program entirely due to these delays which caused significant financial hardships.
 - The application process differs by program, which creates additional frustration among the contractors. Most contractors would prefer submitting applications through an online portal.
 - The timing for application processing for New Manufactured Homes Program is out-of-sync with the home delivery and siting activities, creating additional delays for these retailers.
 - There is a lack of transparency in the application process, so contractors are not aware of the status of the application. Therefore, many applications are delayed or declined without explanation from Energy Trust.

Challenges in Reaching DEI and Rural Communities

- **Despite Energy Trust and PMC recruitment efforts, there is still a lack of qualified minority contractors enrolled in these programs.** There is also a lack of contractors that serve the rural areas, making it difficult to encourage participation in these communities.
- **Program constraints limit participation.** Many contractors reported that Energy Trust’s program offerings are too inflexible to meet rural customers’ needs. Too often, these older homes need remediation work, which these rural and elderly customers cannot afford. Therefore, they are not able to participate in the Energy Trust program, regardless of the incentive amount available.
- **Lack of diversity in the marketing materials.** Few materials are translated into Spanish, despite the large concentrations of residents who do not speak English as a first language.

Website Concerns

- **The current website is difficult for contractors and customers to navigate, as it is not designed to provide information about all the Residential program offerings.**

- **After this process evaluation, the Residential website has been modified and updated to address many concerns raised by internal staff.** However, some issues remain.
 - There is mixed messaging that combines solar with energy efficiency, which confuses customers.
 - Contractors cannot locate the program information they need to promote specific Residential program offers on the website.

Challenges with the Retailers Program

- **Energy Trust staff are not actively involved with retailers in the New Manufactured Homes Program and with the various retail Fixed Price Promotions.**
 - Although the Retail PDC has extended the footprint of participating stores significantly in rural areas, the retailers are not fully engaged with Energy Trust staff. The PMC has only four regional representatives, which is too small to sufficiently serve the 500+ store network in the retail program, thus leading to a lack of communication and understanding about upcoming Energy Trust promotions.
 - The distributors also expressed frustration at the lack of interaction with Energy Trust or the PMC.

6.4 Research Objective #4: Assessing Future Program Solutions.

Improving Current Measure Offers

- **Align the Energy Trust offers to better serve underserved utility customers.** A clear take-away from these interviews was the Energy Trust need to develop more flexible program offers that went beyond simple incentive programs for energy efficiency improvements.
- **Consider expanding the list of available gas measures, especially in rural and DEI-focused communities, to include energy efficient gas furnaces.** Staff from several gas utilities believe significant energy savings opportunities still exist, especially in low- and moderate-income households.

Community Outreach and Engagement

- **Energy Trust staff should work proactively to engage directly with the leaders in the CBOs on a regular basis, rather than outsourcing communications to the PMC.** The relationships with the CBOs should be viewed as strategic partnerships that involve the highest level of interaction with Energy Trust staff.

Contractor Support

- **Develop a new and improved online portal for contractors.** The delays in application processing reinforced the need for market actors, especially the installation contractors and the CBOs, to be able to track the status of incentive payments. Program staff suggested developing a simpler self-service option that would provide status updates of submitted projects.
- **Offer more contractor training opportunities in-person and in locations outside of the Portland metropolitan area.** Both contractors and verifiers requested more training opportunities with Energy Trust staff.

New Approaches

- **Incorporate Non-Energy Benefits in MADs.** Residential program staff believes that certain measures, such as air conditioners, may lead to significant health improvements for those individuals suffering from severe medical conditions, such as Multiple Sclerosis.
- **Expand the suite of electric measures to include heat pumps, coordinated activities with DR programs, and heat pump offerings for multifamily residences.** Consider adding “triple windows”⁴⁹ and electrification measures including dehumidifiers and EV chargers in future program offerings.

6.5 Recommendations

- **Recommendation #1. Energy Trust Residential program staff should reengage with the market actors across all segments to address ongoing concerns and provide timely and updated communication pathways with these groups.** Ultimately, the program success depends upon interactions with Residential program staff. As the process evaluation revealed, many market actors do not have full understanding of Energy Trust’s intentions, which suggest that Energy Trust need to engage more proactively with these critical groups. Other areas for improvement include:
 - Develop and test an online portal for contractors to submit program applications, that also provides transparency into the status of these applications.
 - Standardize the application submission process to online rather than the current approach which allows a mix of paper or online applications, depending upon the program offering.
 - Proactively reach out to market segment experts including utility staff, manufacturers, retailers, and distributors to provide guidance and input into long-term program planning. These subject-matter experts can provide additional insights and approaches that will help broaden the program’s reach.
 - Continue to recruit contractors located in rural and diverse communities, to ensure equitable distribution of Energy Trust programs. Increasing participation within the DEI communities could also help to strengthen overall program relationships with Energy Trust and provide more options to customers in these communities.
- **Recommendation #2: Energy Trust staff should review its program offerings and investigate alternative approaches to better match the offerings to the communities it serves.**
 - Develop more specialized offerings that combine grants with incentives to assist low-and moderate-income households in participating in these programs. The current CAP agency funding is appreciated, but the CBOs would like additional options.
 - Investigate the “missed opportunities” available in replacing older gas furnaces in “market rate” homes as the gas utilities staff members believe significant energy savings opportunities still exist.
- **Recommendation #3: Energy Trust staff should look for ways to streamline program communications and delegate internal decision-making so programmatic adjustments can be made in a timely manner.**

⁴⁹ Note, several market actors made this suggestion as they did not know that Energy Trust currently offers “triple pane” windows.

- Program requirements should be more flexible to account for the special needs of low- and moderate-income customers, and residents living in manufactured homes, especially regarding the deadlines for submitting applications.
- Offer more contractor training opportunities in-person and in locations outside of the Portland metropolitan area. Both contractors and verifiers requested more in-person training opportunities with Energy Trust staff.

Appendix A: Staff Interview Guide Process Evaluation of the Residential Program



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Energy Trust Program Staff Interview Guide

Research Objectives	Question Number
Roles and Responsibilities	A1-A3
Changes in Program Design/Delivery	B1-B5
Effectiveness of Program Operations	C1-C5
Effectiveness of New Opportunity Development	D1-D8
Cross Program Coordination	E1-E6
Communication and Reporting	F1-F5
Marketing and Outreach	G1-G6
Data System Tracking	H1-H7
Effectiveness of Coordination with NEEA/Utilities	I1-I11
Effectiveness of Coordination with Community Organizations	J1-J10
Role of Trade Allies	K1-K8
Customer Interactions	L1-L8
Areas for Program Improvement/Enhancement	M1-M4

Table 1: Interview Groups for Residential Program Interviews

Group	Interview Groupings	Notes	Names
A	Energy Trust Operations	Budget, contract, systems	Thad, Marshall, Derek/Brian, Andrew
B	Energy Trust New Opportunities	NH strategy, pilots	Mark, Scott
C	Energy Trust Customer Acquisition	Ryan - retail	Ryan, Mana
D	Energy Trust Cross-program		Alex, Jeni, Amanda/Kate, Quinn
E	Energy Trust CCS/Outreach	Outreach, TA management, customer service	Sue, Karen, Caryn, Cameron
F	Energy Trust Finance	PMC invoicing, project compliance	Cheryl, Michelle
G	CR Retail PDC contract	Retail management, strategy, budget	Alecia Dodd
H	CR PMC	Overall management, strategy, budget (OR and WA)	Eric, Jenny, Kyle
I	CR PMC	Initiatives and operations support	Dave, Dan G, Patrick, Alder, Jacob
J	TRC New Homes PDC contract	EPS, management, strategy, budget (OR and WA)	Shannon Todd, Cheryl Lacombe

A. Roles and Responsibilities – (Groups A-J)

A1. What is your current role at Energy Trust for the Residential Program?

A2. How long have you been in this position?

A3. How has your role changed or evolved during the past three years?

B. Changes in Program Design and Delivery (Groups A-C; H)

B1. How has the transition to a single program portfolio structure affected the program?

(1) How has this new structure simplified program operations?

(2) How has the new structure complicated program operations?

B2. Did this new structure affect the ways in which program goals are defined?

B3. How has the division of responsibilities into three groups: Operations Fulfillment, Customer Acquisition and New Opportunities and Development worked out?

B4. What have been some of the biggest successes due to this new program structure?

B5. What challenges with the Residential Program still remain?

C. Effectiveness of Program Operations (Group A)

- C1. How is the program currently operating relative to goals? Is the program operating in line with your expectations?
- C2. How did COVID-19 impact the Residential program operations? Are there still impacts due to the pandemic? If so, what are they?
- C3. How did the natural disasters/wildfires impact the Residential program? How did the program adapt to these events? What were the results?
- C4. What are the “lessons learned” from these experiences that you will use to support the Residential Program going forward?
- C5. Have you been monitoring the previous recommendations made for program improvements? If so, what recommendations have been implemented? Which ones are no longer relevant?

D. Effectiveness of New Opportunity Development (Groups B, D, H, J)

- D1. What is the process for vetting, developing, implementing and then adopting learnings from CRPs?
 1. How effective is the process?
 2. What have been some of the most important outcomes?
- D2. How as the five-year forecast developed?
 1. How does the forecast support measure development, research or other activities to advance these areas of opportunity?
 2. Are there ways it can be improved?
- D3. What processes or tools have been put in place in the last few years that have been effective in developing new opportunities?
 1. What has been tried but not been effective?
- D4. How does the Residential team forecast and adapt to code changes, standards and/or market changes that impact measures?
 1. Are there ways to improve this process?

- D5.* How does the Energy Trust's measure development process, trainings and technical guidelines support the development of new and updated MADs?
- D6.* Does the program have the right mix of measures to achieve its goals? What are the opportunities to develop new or adapted measures to better serve customers?
- D7.* What other measures, besides heat pumps, do you think would work well as fixed-price offerings?
- D8.* How do the PMC/PDC and internal Energy Trust program structure work to support new opportunities?
1. Does this structure hinder new opportunities?
 2. If so, how?

E. Cross Program Coordination (Groups A-D)

- E1.* How does the Residential program coordinate or collaborate with other programs/functions?
- E2.* How are referrals to the Multifamily track of the Existing Buildings program handled?
1. Are customers "lost" in the process?
 2. How can this be improved?
- E3.* How are referrals to and from the Solar program handled?
1. Are customers "lost" in the process?
 2. How can this be improved?
- E4.* Do you coordinate with the Residential team on budgeting? If so, how does this work?
- E5.* How do you coordinate with the Residential program on marketing? How could this be improved?
- E6.* How does measure development work when measures cross programs? How does the Residential team support cross-program measure development? How could this be improved?

F. Communication and Reporting (Groups A-C, E)

- F1.* How frequently do you communicate with the PMC? The PDCS? Using what methods?
- F2.* Do the monthly reports provide you with right level of detail? Are there items that should be added? If so, what?
- F3.* How responsive is the PMC to your questions or concerns?
- F4.* How responsive are the PDCS to your questions or concerns?
- F5.* Are the right people included in the communications activities? Should anyone else be added?

G. Marketing and Outreach (Groups A,C,E,G H, I, J)

- G1.* What are the primary marketing and outreach activities? How have these activities evolved with the new Residential Program structure?
- G2.* How are the marketing/outreach activities being tracked? Is this an effective system? Why or why not?
- G3.* How has the program targeted customers with high potential for energy savings and/or high likelihood of measure adoption?
- G4.* How is the program addressing these unique outreach challenges? (*Probe on each*)
 - 1. Reaching out to historically underserved customers?
 - 2. Engaging customers who have not participated before?
 - 3. Deploying effective strategies to promote energy efficiency and energy savings?
 - 4. Developing/refining the call to action in its messaging?
 - 5. Promoting the non-energy benefits (multiple benefits) of energy efficiency such as health, disaster recovery, building resilience/safety, and comfort?
- G5.* Overall, how should Energy Trust change its marketing tactics or strategies?
 - 1. Are there any improvements that should be made to:
 - 2. Reaching out to historically underserved customers?

3. Engaging customers who have not participated before?
 4. Better ways to promote energy efficiency and energy savings?
 5. Modifying the call to action in its messaging?
 6. Promoting the non-energy benefits or (multiple benefits) of energy efficiency programs?
- G6. What other changes, if any do you think should be made to improve marketing and outreach in the next program year?

H. Data Systems Tracking (Groups A, G, H, I, J)

H1. What tracking systems are you currently using? (PT and PBI) How do they work?

1. For those tracking systems that you are familiar with, how are projects tracked?
2. How are measures tracked?
3. What is working well with the tracking systems?
4. What needs to be improved?

H2. Has PBI been integrated sufficiently to support tracking and reporting functions?

H3. How frequently do you receive data reports/updates? Is this sufficient?

H4. How is the program using data to gain insight into customers?

1. Are Energy Trust or PMC staff performing any data mining?
2. If so, what have been the results?

H5. How are customer data used to develop into new program outreach materials?

H6. How are customer data used in developing new or updated measures?

H7. What, data tracking challenges still exist? Why do you say that?

I. Effectiveness of Coordination with NEEA/Utilities (Groups A-C, E)

NEEA

- I1. What is NEEA's role in the Energy Trust's Residential Program? Is this role clearly defined?
- I2. How frequently do you talk with NEEA staff? Is this sufficient?

13. How could the relationship with NEEA be enhanced or improved?

Funding Utilities (PGE, Pacific Power, NW Natural, Cascade Natural Gas, Avista)

14. What does the role do the Energy Trust's funding partners (utilities) for the Residential Program?
Are these roles clearly defined?

15. How are the utilities working with Energy Trust to support the Residential Program? What support does Energy Trust provide to the utilities regarding the Residential Program?

1. What areas are working well?

2. What areas need to be improved?

16. Are you communicating effectively with the utility staff? Is there anything that should be changed to improve communication with the utilities? If so, what?

17. What opportunities are there to enhance these working relationships?

Clark Public Utilities

18. What is Clark Public Utilities' role in the Residential Program? Is this role clearly defined?

19. How effective has the relationship been? What areas are working well? What areas need to be improved?

110. Are you communicating effectively with Clark Public Utilities staff? Is there anything that should be changed to improve communication? If so, what?

111. What opportunities are there to enhance this working relationship?

J. Effectiveness of Coordination with Community Organizations (Groups A-C, I)

J1. How is the program working with the Community Action Agencies (CAAs) and the community-based organizations (CBOs)?

J2. How many community organizations are involved with the program?

J3. Who are the people in the community you reach out for input on program direction or to understand community needs? to?

- J4.* How frequently do you interact with these organizations? Is this sufficient?
- J5.* What feedback, if any have you received from the community organizations about the Energy Trust Residential Partner Funding?
- J6.* How effective has the Residential Program been in supporting these organizations?
- J7.* Are these organizations effective in supporting your outreach to the communities that they serve?
- J8.* Has there been any community meetings that you and the community organization organized to inform and educate the residents about your program?
- J9.* How could these relationships be enhanced or improved?
- J10.* Are there other organizations and other grassroots/community leaders that you should reach out to going forward?

K. Role of Trade Allies (Groups A, C, E, G, I, J)

- K1.* How does Residential Program work with trade allies?
- K2.* How are trade allies recruited into the program? (Probe on each group)
1. HVAC contractors
 2. Builders
 3. Verifiers
 4. Retailers
 5. Manufactured Housing Retailers
 6. Others
- K3.* How do you gather feedback from these trade allies? Does it differ by trade ally type? If so, how?
- K4.* What types of feedback have you received from trade allies? (Probe on each group)
1. HVAC contractors

2. Builders
3. Verifiers
4. Retailers
5. Manufactured Housing Retailers
6. Others

K5. How does the program reach builders in the different regions (i.e., Oregon, Washington).

How effective have these outreach activities been?

K6. For builders/home verifiers: What benefits, besides incentives, do you offer new home builders to encourage them to participate in the program? Which strategies have been most effective? Why?

K7. How is the program reaching out to minority- and women-owned trade allies? Have these approaches been effective? How could this process be improved or refined?

K8. How do you think the Residential Program could improve to better serve these trade allies? What strategies should be considered for each group?

L. Customer Interactions

Group F ONLY

L1. For the rebate applications, how long is the application processing time? Does this align with your expectations? (Group F)

CUSTOMER INTERACTIONS (Groups A-C, E, G, H, I, J)

L2. What type of feedback have you received from customers? How are you monitoring customer satisfaction?

L3. Are you aware of any delays in program delivery?

1. If so, which program elements were delayed?
2. How were these issues resolved?

L4. For the programs you are most familiar with, please describe how customers participate in each program: (Probe for each):

1. New Construction
 2. Home Retrofit incentives
 - (1) Standard incentives
 - (2) Savings Within Reach
 3. Retail Products Program
 4. Community Partner Funding Program
 5. Manufactured homes assessments and free services
- L5. How is the Residential Program currently working with customers who self-install energy efficient equipment or don't use as trade ally contractor?
- L6. How should the Residential Program support customers who are self-Installing efficient equipment or otherwise unable to use a trade ally contractor?
- L7. What are the main challenges in serving the low-to-moderate income customers?
1. Are you able to recruit them cost-effectively into the program?
 2. Are you able to provide them with cost-effective measures?
- L8. What are the main challenges in serving customers living in manufactured housing?
1. How effective has the Manufactured Home outreach activities

M. Areas for Program Improvement/Enhancement (ALL GROUPS)

- M1. How else could Energy Trust and/or the PMC improve processes - for incentive processing, forms development, marketing campaigns and others - to increase efficiency?
- M2. What opportunities do staff feel would benefit most from added resources moving forward?
- M3. Should the program management and delivery be structured differently to improve implementation and efficient use of program resources? If so how?
- M4. Do you have anything else to add?

Thank you for sharing your insights and taking the time to participate! Your input is greatly appreciated.

Appendix B: Electric Utility Interview Guide Process Evaluation of the Residential Program



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Electric Utility and Energy Trust Staff Group Interview Guide

Research Objectives	Question Number
Roles and Responsibilities	A1-A2
Effectiveness of Coordination	B1-B5
Effectiveness of Program Operations	C1-C9
Marketing and Outreach	D1-D4
Areas for Program Improvement/Enhancement	E1-E8

A. Roles and Responsibilities

- A1. What is your current role at your organization?
- A2. How long have you been in this position?

B. Effectiveness of Coordination

- B1. What types of activities related to the Energy Trust Residential Program do you coordinate or collaborate?
- B2. What role(s) does Pacific Power/PGE play(s) in Energy Trust's Residential program? (probe for marketing, customer communications/outreach, program/offering design)
- B3. Are roles and responsibilities clearly defined and understood?
- B4. How frequently do staff from Pacific Power/PGE talk with Energy Trust Residential staff?
 - 1. Who are your main points of contact?
 - 2. Is the communication with the Energy Trust Staff sufficient?
 - 3. Is there anything that should be improved regarding communication with the Energy Trust staff? If so, what?
- B5. How does [utility] receive updates regarding program changes? [**Probe, if not mentioned:** does the Conservation Advisory Council (CAC) serve as a source for information about program updates, incentive level changes, etc.?

C. Effectiveness of Program Operations

C1. From your perspective, how is the Residential Program currently operating relative to goals? Is the program operating in line with your expectations?

1. Do customers typically know where to go to get information on Energy Trust programs?

C2. Are [utility] staff able to answer customer questions about the programs or direct them to where they can find an answer?

C3. What is the process for directing customers to programs when they are interested in participating? How has this process been working?

C4. What do you think are the main barriers to residential program participation?

C5. How did COVID-19 impact each of the areas of collaboration between Energy Trust and Pacific Power/PGE? Are there still impacts due to the pandemic? If so, what are they?

C6. How did the natural disasters/wildfires impact each of the areas of collaboration? How did the teams adapt to these events? What were the results? How should the program address these types of events in the future?

C7. How have the modifications to the heat pump requirements changed over time? How has this impacted the utilities' priorities around heat pumps?

C8. What have been impacts from lowering the HPSF requirements on program participation? Has this change made it easier or more difficult to promote heat pumps?

C9. What has been the effect of the Fixed-Pricing Promotion for heat pumps? Have you seen a move toward replacing electric forced air furnaces with heat pumps in your service territories? If so, where?

D. Marketing and Communications

D1. What types of marketing and communications activities have you been involved in? Probe for each:

1. Smart thermostats

2. Heat Pumps

3. Heat Pump Water Heaters

4. Residential New Construction program (i.e., which elements, building, verifying, others)

- D2. What marketing activities or tactics have been working well? Why do you say that?
- D3. What other changes, if any, do you think should be made to improve marketing and outreach in the next program year?
- D4. How do you think the Residential Program could improve to better serve customers?

E. Areas for Program Improvement/Enhancement

- E1. **For Pacific Power/PGE:** How else could Energy Trust and/or the PMC improve processes should best prioritize incentives and available resources improve the experience for residential customers?
- E2. Are there any technologies that Energy Trust should consider offering in the future? (Probe on emerging DR issues as appropriate: smart thermostats, heat pump water heaters, grid initiatives, others?)
- E3. Are there any measures that should be eliminated from the current offerings?
- E4. What (if any) specific feedback have you received from customers about the Residential Program offerings?
- E5. How satisfied have customers been with Energy Trust programs?
- E6. **For Pacific Power/PGE:** Are there any other offerings that Energy Trust should consider going forward?
- E7. **For Pacific Power/PGE:** What other measures, besides heat pumps, do you think would work well as fixed-price offerings?
- E8. Do you have anything else to add?

Thank you for sharing your insights and taking the time to participate! Your input is greatly appreciated.

Appendix C: Natural Gas Utility Interview Guide Process Evaluation of the Residential Program



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Natural Gas Utility Staff Interview Guide

Research Objectives	Question Number
Roles and Responsibilities	A1-A2
Effectiveness of Coordination	B1-B5
Effectiveness of Program Operations	C1-C7
Marketing and Outreach	D1-D4
Areas for Program Improvement/Enhancement	E1-E8

A. Roles and Responsibilities

- A1. What is your current role at your organization?
- A2. How long have you been in this position?

B. Effectiveness of Coordination

- B1. What types of activities related to the Energy Trust Residential Program do you coordinate or collaborate? (**Probe** for marketing, customer communications/outreach, program/offering design; **for NW Natural**, probe for differences between Oregon and SW Washington).
- B2. What role(s) does NWN/ Cascade Natural Gas/Avista play (s) in Energy Trust's Residential program? (**Probe** for: marketing, customer communications/outreach, program/offering design).
- B3. Are roles and responsibilities clearly defined and understood?
- B4. How frequently do staff from NWN/Cascade Natural Gas/Avista talk with Energy Trust Residential staff?
1. Who are your main points of contact?
 2. Is the communication with the Energy Trust Staff sufficient?
 3. Is there anything that should be improved regarding communication with the Energy Trust staff? If so, what?
- B5. How does [utility] receive updates regarding program changes? [**Probe, if not mentioned**: does the Conservation Advisory Council (CAC) serve as a source for information about program updates, incentive level changes, etc.?]

C. Effectiveness of Program Operations

- C1. From your perspective, how is the program currently operating relative to goals? Is the program operating in line with your expectations?
- C2. Do customers typically know where to go to get information on Energy Trust programs?
- C3. Are [utility] staff able to answer customer questions about the programs or direct them to where they can find an answer?
- C4. What is the process for directing customers to programs when they are interested in participating? How has this process been working?
- C5. What do you think are the main barriers to residential program participation?
- C6. How did COVID-19 impact each of the areas where you collaborate with Energy Trust? Are there still impacts due to the pandemic? If so, what are they?
- C7. How did the natural disasters/wildfires impact program operations? How did the program operations adapt to these events? What were the results? How should the program address these types of events in the future?

D. Marketing and Outreach

- D1. What types of marketing and outreach activities have you been involved in? Probe for each:
 1. Smart thermostats
 2. Gas furnaces
 3. Ceiling insulation
 4. Fireplaces
 5. Residential New Construction program (i.e., which elements, building, verifying, others)
- D2. What marketing activities or tactics have been working well? Why do you say that?
- D3. What other changes, if any, do you think should be made to improve marketing and outreach in the next program year?
- D4. How do you think the Residential Program could improve to better serve customers?

E. Areas for Program Improvement/Enhancement

- E1. How else could Energy Trust and/or the PMC improve processes should best prioritize incentives and available resources improve the experience for residential customers?
- E2. Are there any technologies that Energy Trust should consider offering in the future?
- E3. Are there any measures that should be eliminated from the current offerings?
- E4. What (if any) specific feedback have you received from customers about the Residential Program offerings?
- E5. What (if any) specific feedback have you received from customers about the Residential Program offerings?
- E6. How satisfied have customers been with Energy Trust programs?
- E7. Are there any other offerings that Energy Trust should consider going forward?
- E8. Do you have anything else to add?

Thank you for sharing your insights and taking the time to participate! Your input is greatly appreciated.

Appendix D: NEEA Interview Guide Process Evaluation of the Residential Program



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NEEA Interview Guide

Research Objectives	Question Number
Roles and Responsibilities	A1-A2
Changes in Program Design/Delivery	B1-B2
Effectiveness of Coordination	C1-C5
Program Operations	D1-D3
Areas for Program Improvement	E1E4

A. Roles and Responsibilities

- A1. What is your current role at your organization?
- A2. How long have you been in this position?

B. Changes in Program Design and Delivery

- B1. How has the restructured Energy Trust's Residential Program affected your organization, if at all?
- B2. How has the internal restructuring at NEEA affected your relationships with the Energy Trust's Residential Program staff, if at all?

C. Effectiveness of Coordination

- C1. On what types of activities do you coordinate or collaborate with Energy Trust's Residential program?
- C2. Are roles and responsibilities clearly defined and understood?
- C3. What value does Energy Trust add to the new construction market?
 - C4. Do you see opportunities to expand or change current approach to something else that would provide more benefit?
 - C5. What are NEEA's long term plans to support new construction activities? How can Energy Trust support those plans?

D. Program Operations

- D1. Who do you speak with at the Energy Trust regarding its Residential Program? How frequently do you interact? Is this sufficient?
- D2. How do you submit data or information to Energy Trust? Is this process working? Could it be improved?
- D3. Do you coordinate any of the trade ally marketing or outreach activities in the New Construction Market? If not, should there be better coordination of these activities?

E. Areas for Program Improvement/Enhancement

- E1. NEEA and Energy Trust provide support in many areas. What, if anything, could be improved or expanded? (Probe on each)
1. New Product Research
 2. Training
 3. Market Transformation Initiatives
 4. Code Advancement
 5. Software and Data Tracking
 6. Others (specify)
- E2. What **other** opportunities are there to enhance collaboration and working relationships between NEEA and Energy Trust's Residential program?
- E3. Thinking about where the Energy Trust and NEEA collaborate, are there examples of where the market has shifted and the need for investment has declined?
- E4. Do you have anything else to add?

Thank you for sharing your insights and taking the time to participate! Your input is greatly appreciated.

Appendix E: Existing Homes Contractor Interview Guide Process Evaluation of the Residential Program



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Existing Homes Trade Ally Interview Guide REVISED

Research Objectives	Question Number
Contractor Participation	A1-A3
Contractor Demographics	B1-B4
Contractor Sales Trends	C1-C8
Program Operations	D1-D8
Impact of COVID and Other Disasters	E1-E6
Marketing and Outreach	F1-F9
Communication and Reporting	G1-G3
Cross Program Participation	H1-H3
Program Offerings	I1-I7
Satisfaction	J1-J2
Areas for Program Improvement	K1-K2

Respondent Name: _____

Organization: _____

Date: _____

Interviewer: _____

Hello, my name is [INTERVIEWER NAME] with Johnson Consulting Group and I'm calling on behalf of Energy Trust of Oregon. As part of our evaluation of the Residential Program, we are talking with contractors like you to learn about your working relationship with Energy Trust. Do you have about 20 minutes to answer some questions, or can we schedule time within the next week to talk? As a way to thank you for your time, we will send you a \$50.00 e-gift card.

[IF AGREE TO INTERVIEW CONTINUE, OTHERWISE THANK AND TERMINATE]

Thanks for taking the time to talk today. For note taking purposes, I'd like to record this interview. Any comments you make will be kept confidential and will not be attributed to you directly in our report.

A. Contractor Participation

A1. According to our records, your business is enrolled in the Energy Trust Residential Trade Ally Network. Is this correct?

1. Yes
2. No-Ask A2: **IF NONE: THANK AND TERMINATE**
3. Not Sure
4. Don't know- Go to A2

A2. What Energy Trust Residential Programs have you participated in 2020? (**Mark all that apply**)

1. Home Retrofit
2. Existing Manufactured Homes Program
3. Savings Within Reach
4. Bonus Offer Programs
5. Others (Specify)- **IF NOT RESIDENTIAL; THANK AND TERMINATE**
6. **IF NONE: THANK AND TERMINATE**

A3. How many years has your organization been working with Energy Trust? (Your best estimate is fine.)

_____ Number of years.

B. Contractor Demographics

B1. What is your current title?

1. Owner
2. Manager
3. Salesperson
4. Office Manager/Administrative Support
5. Other (please specify)

B2. Is your firm a? (MARK ALL THAT APPLY)

1. Woman-Owned Firm
2. Minority-Owned Firm
3. Veteran-Owned Firm
4. Other
5. None of the Above
99. Don't Know

B2A. IF YES: Is your firm (Mark all that apply)

1. Self-certified
2. Certified on COBID
3. Certified through another program (Specify _____)
99. Don't know

B3. How many people work at your firm? _____ number of employees.

B4. How many offices/locations do you have? _____ number of locations

C. Contractor Sales Trends

C1. What types of products do you install? (Mark All That Apply).

1. HVAC- Electric measures- **GO TO C2**
 - (1) Heat pumps
 - (2) Ductless heat pumps
 - (3) Electric furnaces
 - (4) Central Air Conditioning
 - (5) Other (Specify)
2. Gas Measures
 - (1) Furnaces
 - (2) Fireplaces

(3) Other (Specify)

3. Building Shell (insulation, air sealing, doors, windows)
4. Plumbing (water heating)
5. Other, please specify: _____

C2. About what percentage of your customers are interested in purchasing cooling equipment? % _____ None _____ 99. Don't Know

C3. Approximately what percentage of your customers are interested in purchasing

(Ask for each category):

- | | | | |
|-----------------------------|---|------|----------------|
| 1. Central air conditioners | % | None | 99. Don't Know |
| 2. Heat Pumps | % | None | 99. Don't Know |
| 3. Ductless Heat Pumps | % | None | 99. Don't Know |
| 4. Window Units | % | None | 99. Don't Know |
| 5. Something Else | % | None | 99. Don't Know |

All continue

C4. Who are your primary customers?

1. Single Family Home Owners
2. Landlords
3. Builders
4. Manufactured Home Owners
5. Other (Specify _____)

C5. Based on annual revenues **(2020)**, what percentage of your work is done for the?

- | | | | |
|-----------------------|---|------|----------------|
| 1. Residential Sector | % | None | 99. Don't Know |
| 2. Multifamily Sector | % | None | 99. Don't Know |
| 3. Commercial Sector | % | None | 99. Don't Know |

C6. When you consider all of the products your firm sells or installs in a year, what percentage are installed (Ask all):

1. in Oregon? 1. ___% 2. None 99. DK
2. in Washington? 1. ___ % 2. None 99. DK

C7. Approximately what percentage of your total sales of products in **2020** do you install annually qualify for a rebate/incentive from Energy Trust?

_____ % None 99. Don't Know

C8. For sales of equipment that **are NOT ELIGIBLE**, why are customers **not installing** eligible equipment (**Open Ended: Mark all that apply**)

1. Requested equipment is not eligible- does not meet energy efficiency requirements
2. Customer doesn't qualify for installation (not homeowner)
3. Cost is too high
4. Customer is not interested
5. Eligible equipment is not available
6. Other (Specify)

D. Program Operations

D1. Based on your experience with the Energy Trust Program in the past year, how has the program performed relative to your expectations? Why do you say that
(OPEN ENDED)

D2. Do you primarily submit data to Energy Trust using:

1. Paper Forms
2. Online Forms
3. Both
99. Don't Know

D3. Have your payments been delayed the past year?

1. Yes—go to D4
2. No

Don't Know

D4. About how many months have these payments been delayed?

_____ # of Months

D5. Did you receive electronic ACH payments from Energy Trust?

1. Yes
2. No

Don't Know

D6. Has your firm used instant incentives?

1. Yes
2. No- **SKIP TO NEXT SECTION**
3. Other (please specify) _____

99. Don't Know- **SKIP TO NEXT SECTION**

D7. If yes, how do you explain the instant incentive process to your customers?

D8. Do you have any suggestions to improve the application submittal process?

E. Impact of COVID and Other Natural Disasters

E1. What challenges have you encountered in the last two years? How has COVID-19 and natural disasters impacted your business? **(OPEN ENDED)**

E2. How have these disasters affected the availability of qualifying equipment?

E3. What types of steps has your organization taken to lessen these impacts?

E4. How did the Residential Program staff support your organization during these set-backs?

E5. How has the wildfires affected your business operations, if at all **(OPEN ENDED)?**

E6. Are customers asking more about Indoor Air Quality issues since the wildfires? If so, what?**(OPEN ENDED)**

F. Marketing and Outreach

F1. How do you promote your products and services to customers? (Mark All That Apply):

1. Websites
2. Print Ads
3. Online Ads
4. Media-Radio/TV
5. Social Media
6. Word-of-Mouth
7. Others (Specify_____)

F2. Of all of those activities, which have been the most effective in generating leads for your business?

1. Websites
2. Print Ads
3. Online Ads
4. Media-Radio/TV
5. Social Media
6. Word-of-Mouth
7. Others (Specify_____)

F3. Have you participated in the following Energy Trust promotional activities? (Probe for each):

1. Participation bonuses for (probe for each)
 - (1) Gas furnaces
 - (2) Insulation
2. Product-specific promotions for (probe for each)
 - (1) Windows
 - (2) Central AC

- (3) Unitary Heat Pumps
- (4) Gas furnace
- (5) Water heaters/ heat pump water heaters
- (6) Extended capacity heat pumps
- (7) Ductless Heat Pumps
- (8) Smart thermostats

F4. Do you use any of the following Energy Trust marketing tools?

1. Incentive booklet
2. Website listing
3. Other tools? Please specify

F5. Have these tools helped you reach more customers? If so how?

F6. Do you have any suggestions for how these tools could be improved?

F7. Do you read the Insider blog or monthly Insider email newsletter?

1. If Yes, Do the Insider blog and email newsletter meet your needs?
2. If Yes, What do you find useful about them?
3. If no, what would make them more useful to you?

F8. Have you used any Business Development Funding from Energy Trust in the past year? If so what have been the results?

F9. How else could program staff improve their marketing activities to increase participation for your customers? **(OPEN ENDED)**

G. Communication and Reporting

G1. Does the Program Manager interact with you consistently?

1. Yes
2. No
99. Don't Know

G2. Have you:

1. Received timely responses to your questions?
2. Received clear responses to your questions?

G3. Do you have any suggestions for how Energy Trust could improve communication with contractors like you? **(OPEN ENDED)**

H. Cross-Program Participation

H1. Do work with Energy Trust on any other programs besides Existing Homes? [Probe for installation of measures in Energy Trust's New Homes and Commercial/Multifamily program].

1. Yes (Specify and Continue)
2. No: Skip to Next Section
99. Don't Know Skip to Next Section

H2. If yes, is the trade ally support consistent across programs? Specifically, is the support you receive consistent across programs with respect to:

- | | 1 | 2 | 99 |
|--|-----|----|----|
| 1. Ease of incentive processing? | Yes | No | DK |
| 2. Access to call centers? | Yes | No | DK |
| 3. Availability and responsiveness of account managers? | Yes | No | DK |
| 4. [For any no answers ask] Do you have any suggestions for ways Energy Trust can this support? | | | |

H3. Is there anything else that would make the trade ally network more valuable to you and your firm?

I. Program Offerings

I1. **ASK for those that Participate in Savings Within Reach (See A2)? All OTHERS**

SKIP: Do you provide incentives for Savings Within Reach Customers?

1. Yes

2. No- **SKIP TO I6**

Don't Know

- I2. If YES, What challenges do you have in qualifying customers for the Savings Within Reach Program (OPEN ENDED)
- I3. How could the program be made more clear to customers?
- I4. Do you refer your customers to other social service organizations or community action agencies?
1. Yes
 2. No
- I5. How could the Savings Within Reach Program improve? (OPEN ENDED)

ALL CONTINUE

- I6. Are there measures besides heat pumps that would work well as fixed price offerings?
- I7. What are additional opportunities to serve customers living in manufactured housing?

J. Program Satisfaction

- J1. On a scale of "1" to "5" where "1" means "Not at all Satisfied" and "5" means "Very Satisfied," how would you rate your satisfaction the Residential Program overall?

_____ Why do you say that?

- J2. Using the same scale, how you would rate your satisfaction with the Residential Staff Team?

_____ Why do you say that?

K. Areas for Program Improvement

- K1. Is there anything Energy Trust could do to further support your firm in expanding sales of qualifying equipment, products or services? (**OPEN ENDED**)
- K2. Do you have anything else to add?

Thank you for sharing your insights and taking the time to participate! Your input is greatly appreciated. To thank you for participating in this interview, the Energy Trust would like to send you a \$50.00 e-gift card.

Please confirm your email address: _____

Thanks again!

Appendix F: Manufactured Home Retailer Interview Guide Process Evaluation of the Residential Program



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Final
May 20, 2022

Manufactured Homes RETAILERS Interview Guide

Research Objectives	Question Number
Participation	A1-A2
Demographics	B1-B3
Sales Trends	C1-C5
Program Operations	D1-D6
Impact of COVID and Other Disasters	E1-E5
Marketing and Outreach	F1-F3
Communication and Reporting	G1-G4
Program Satisfaction	H1H2
Areas for Program Improvement	I1-I2

Respondent Name: _____

Organization: _____

Date: _____

Interviewer: _____

Hello, my name is [INTERVIEWER NAME] with Johnson Consulting Group and I'm calling on behalf of Energy Trust of Oregon. As part of our evaluation of the Residential Program, we are talking with contractors like you to learn about your working relationship with Energy Trust. Do you have about 20 minutes to answer some questions, or can we schedule time within the next week to talk? As a way to thank you for your time, we will send you a \$50.00 e-gift card.

[IF AGREE TO INTERVIEW CONTINUE, OTHERWISE THANK AND TERMINATE]

Thanks for taking the time to talk today. For note taking purposes, I'd like to record this interview. Any comments you make will be kept confidential and will not be attributed to you directly in our report.

A. Contractor Participation

A1. According to our records, your organization participated in Energy Trust's Manufactured Homes Program. Is that correct?

1. Yes
2. No THANK AND TERMINATE
3. 99. Don't Know

A2. How many years has your organization been working with Energy Trust? (Your best estimate is fine.)

_____ Number of years.

B. Demographics

B1. What is your current title?

1. Owner
2. Manager
3. Salesperson
4. Office Manager/Administrative Support
5. Other (please specify)

B2. How many people work at your firm? _____ number of employees.

B3. How many offices/locations do you have? _____ number of locations

C. Sales Trends

C1. What types of Manufactured Homes do you sell? **(Mark All That Apply)**

1. Eco-Rated
2. ENERGY STAR Rated
3. NEEM RATED
4. Other (Specify_____)

C2. Who are your primary customers?

1. Manufactured Home Owners
2. Landlords
3. Other (Specify_____)

C3. When you consider all of the products your firm sells or installs in a year, what percentage are installed (Ask all):

- | | | |
|--------------------------|-----------|--------|
| 1. in Oregon? 1. ___% | 2. None | 99. DK |
| 2. in Washington? 1. ___ | % 2. None | 99. DK |

C4. Approximately what percentage of your total sales of products **in 2020** do you install annually qualify for a rebate/incentive from Energy Trust?

- | | | |
|--------|------|----------------|
| _____% | None | 99. Don't Know |
|--------|------|----------------|

C5. For sales of equipment that **are NOT ELIGIBLE**, why are customers **not installing** eligible equipment (**Open Ended: Mark all that apply**)

1. Equipment is not eligible- does not meet energy efficiency requirements
2. Customer doesn't qualify for installation
3. Cost is too high
4. Customer is not interested
5. Eligible equipment is not available
6. Other (Specify)

D. Program Operations

D1. Based on your experience with the Energy Trust Program in the past year, how has the **Manufactured Homes Program** performed relative to your expectations? Why do you say that (**OPEN ENDED**)

D2. Do you primarily submit data to Energy Trust using:

1. Paper Forms
2. Online Forms
3. Both
99. Don't Know

D3. Have your payments been delayed the past year?

1. Yes—go to D4
 2. No
- Don't Know

D4. If yes, About how many months have these payments been delayed?

_____ # of Months

D5. Did you receive electronic ACH payments from Energy Trust?

1. Yes

2. No

Don't Know

D6. Do you have any suggestions to improve the application submittal process?

E. Impact of COVID and Other Natural Disasters

E1. What challenges have you encountered in the last two years? How has COVID-19 and natural disasters impacted your business? (**OPEN ENDED**)

E2. How have these disasters affected the availability of qualifying equipment?

E3. What types of steps has your organization taken to lessen these impacts?

E4. How did the Residential Program staff support your organization during these set-backs?

E5. How has the wildfires affected your business operations, if at all (**OPEN ENDED**)?

F. Marketing and Outreach

F1. How do you promote your products and services to customers? (**Mark All That Apply**):

1. Websites
2. Print Ads
3. Online Ads
4. Media-Radio/TV
5. Social Media
6. Word-of-Mouth
7. Others (Specify_____)

F2. Of all of those activities, which have been the most effective in generating leads for your business?

1. Websites
2. Print Ads
3. Online Ads

- 4. Media-Radio/TV
- 5. Social Media
- 6. Word-of-Mouth
- 7. Others (Specify_____)

F3. How else could program staff improve their marketing activities to increase participation for your customers? **(OPEN ENDED)**

G. Communication and Reporting

G1. Does the **Manufactured Homes Program** Manager interact with you consistently?

- 1. Yes
- 2. No
- 99. Don't Know

G2. Have you:

- 1. Received timely responses to your questions?
- 2. Received clear responses to your questions?

G3. Do you have any suggestions for how Energy Trust could improve communication with contractors like you? **(OPEN ENDED)**

G4. What are additional opportunities to serve customers living in manufactured housing?

H. Program Satisfaction

H1. On a scale of "1" to "5" where "1" means "Not at all Satisfied" and "5" means "Very Satisfied," how would you rate your satisfaction the MANUFACTURED HOMES Program Overall?

_____ Why do you say that?

H2. Using the same scale, how you would rate your satisfaction with the Residential Staff Team?

_____ Why do you say that?

I. Areas for Program Improvement

11. Is there anything Energy Trust could do to further support your firm in expanding sales of qualifying equipment, products or services? (**OPEN ENDED**)
12. Do you have anything else to add?

Thank you for sharing your insights and taking the time to participate! Your input is greatly appreciated. To thank you for participating in this interview, the Energy Trust would like to send you a \$50.00 e-gift card.

Please confirm your email address: _____

Thanks again!

Appendix G: Manufactured Homes Contractor Interview Guide Process Evaluation of the Residential Program



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Final
May 20, 2022

Manufactured Homes Trade Ally Interview Guide

Research Objectives	Question Number
Contractor Participation	A1-A3
Contractor Demographics	B1-B4
Contractor Sales Trends	C1-C8
Program Operations	D1-D8
Impact of COVID and Other Disasters	E1-E6
Marketing and Outreach	F1-F9
Communication and Reporting	G1-G3
Cross Program Participation	H1-H3
Program Offerings	I1-I7
Satisfaction	J1-J2
Areas for Program Improvement	K1-K2

Respondent Name: _____

Organization: _____

Date: _____

Interviewer: _____

Hello, my name is [INTERVIEWER NAME] with Johnson Consulting Group and I'm calling on behalf of Energy Trust of Oregon. As part of our evaluation of the Residential Program, we are talking with contractors like you to learn about your working relationship with Energy Trust. Do you have about 20 minutes to answer some questions, or can we schedule time within the next week to talk? As a way to thank you for your time, we will send you a \$50.00 e-gift card.

[IF AGREE TO INTERVIEW CONTINUE, OTHERWISE THANK AND TERMINATE]

Thanks for taking the time to talk today. For note taking purposes, I'd like to record this interview. Any comments you make will be kept confidential and will not be attributed to you directly in our report.

A. Contractor Participation

A1. According to our records, your business is enrolled in the Energy Trust Residential Trade Ally Network. Is this correct?

1. Yes
2. No- Ask A2: If NONE: THANK AND TERMINATE
3. Not Sure
4. Don't know- Go to A2

A2. What Energy Trust Residential Programs have you participated in 2020? (**Mark all that apply**)

1. Home Retrofit
2. Existing Manufactured Homes Program
3. Savings Within Reach
4. Bonus Offer Programs
5. Others (Specify)- **IF NOT RESIDENTIAL; THANK AND TERMINATE**
6. IF NONE: THANK AND TERMINATE

A3. How many years has your organization been working with Energy Trust? (Your best estimate is fine.)

_____ Number of years.

B. Contractor Demographics

B1. What is your current title?

1. Owner
2. Manager
3. Salesperson
4. Office Manager/Administrative Support
5. Other (please specify)

B2. Is your firm a? (MARK ALL THAT APPLY)

1. Woman-Owned Firm
2. Minority-Owned Firm
3. Veteran-Owned Firm
4. Other
5. None of the Above
99. Don't Know

B2A. IF YES: Is your firm (Mark all that apply)

1. Self-certified
2. Certified on COBID
3. Certified through another program (Specify_____)
99. Don't know

B3. How many people work at your firm? _____ number of employees.

B4. How many offices/locations do you have? _____ number of locations

C. Contractor Sales Trends

C1. What types of products do you install? (Mark All That Apply).

1. HVAC- Electric measures- **GO TO C2**
 - (1) Heat pumps
 - (2) Ductless heat pumps
 - (3) Electric furnaces
 - (4) Central Air Conditioning
 - (5) Other (Specify)
2. Gas Measures
 - (1) Furnaces
 - (2) Fireplaces
 - (3) Other (Specify)
3. Building Shell (insulation, air sealing, doors, windows)
4. Plumbing (water heating)
5. Other, please specify: _____

C2. About what percentage of your customers are interested in purchasing cooling equipment? %_____ None_____99. Don't Know

C3. Approximately what percentage of your customers are interested in purchasing
(Ask for each category):

- | | | | |
|-----------------------------|---|------|----------------|
| 1. Central air conditioners | % | None | 99. Don't Know |
| 2. Heat Pumps | % | None | 99. Don't Know |
| 3. Ductless Heat Pumps | % | None | 99. Don't Know |
| 4. Window Units | % | None | 99. Don't Know |
| 5. Something Else | % | None | 99. Don't Know |

All continue

C4. Who are your primary customers?

1. Single Family Home Owners
2. Landlords
3. Builders
4. Manufactured Home Owners
5. Other (Specify _____)

C5. Based on annual revenues (**2020**), what percentage of your work is done for the?

- | | | | |
|-----------------------|---|------|----------------|
| 1. Residential Sector | % | None | 99. Don't Know |
| 2. Multifamily Sector | % | None | 99. Don't Know |
| 3. Commercial Sector | % | None | 99. Don't Know |

C6. When you consider all of the products your firm sells or installs in a year, what percentage are installed (Ask all):

- | | | |
|--------------------------|-----------|--------|
| 1. in Oregon? 1. ___% | 2. None | 99. DK |
| 2. in Washington? 1. ___ | % 2. None | 99. DK |

C7. Approximately what percentage of your total sales of products **in 2020** do you install annually qualify for a rebate/incentive from Energy Trust?

_____ % None 99. Don't Know

C8. For sales of equipment that **are NOT ELIGIBLE**, why are customers **not installing** eligible equipment (**Open Ended: Mark all that apply**)

1. Equipment is not eligible- does not meet energy efficiency requirements
2. Customer doesn't qualify for installation (not homeowner)
3. Cost is too high
4. Customer is not interested
5. Eligible equipment is not available
6. Other (Specify)

D. Program Operations

D1. Based on your experience with the Energy Trust Program in the past year, how has the program performed relative to your expectations? Why do you say that
(OPEN ENDED)

D2. Do you primarily submit data to Energy Trust using:

1. Paper Forms
2. Online Forms
3. Both
99. Don't Know

D3. Have your payments been delayed the past year?

1. Yes—go to D4
2. No
- Don't Know

D4. About how many months have these payments been delayed?

_____ # of Months

D5. Did you receive electronic ACH payments from Energy Trust?

1. Yes
2. No
3. Don't Know

D6. Has your firm used instant incentives?

1. Yes
 2. No- **SKIP TO NEXT SECTION**
 3. Other (please specify) _____
99. Don't Know- **SKIP TO NEXT SECTION**

D7. If yes, how do you explain the instant incentive process to your customers?

D8. Do you have any suggestions to improve the application submittal process?

E. Impact of COVID and Other Natural Disasters

E1. What challenges have you encountered in the last two years? How has COVID-19 and natural disasters impacted your business? (**OPEN ENDED**)

E2. How have these disasters affected the availability of qualifying equipment?

E3. What types of steps has your organization taken to lessen these impacts?

E4. How did the Residential Program staff support your organization during these set-backs?

E5. How has the wildfires affected your business operations, if at all (**OPEN ENDED**)?

E6. Are customers asking more about Indoor Air Quality issues since the wildfires? If so, what? (**OPEN ENDED**)

F. Marketing and Outreach

F1. How do you promote your products and services to customers? (Mark All That Apply):

1. Websites
2. Print Ads

3. Online Ads
4. Media-Radio/TV
5. Social Media
6. Word-of-Mouth
7. Others (Specify_____)

F2. Of all of those activities, which have been the most effective in generating leads for your business?

1. Websites
2. Print Ads
3. Online Ads
4. Media-Radio/TV
5. Social Media
6. Word-of-Mouth
7. Others (Specify_____)

F3. Have you participated in the following Energy Trust promotional activities? (Probe for each):

1. Participation bonuses for (probe for each)
 - (1) Gas furnaces
 - (2) Insulation
2. Product-specific promotions for (probe for each)
 - (1) Windows
 - (2) Central AC
 - (3) Unitary Heat Pumps
 - (4) Gas furnace
 - (5) Water heaters/ heat pump water heaters
 - (6) Extended capacity heat pumps

(7) Ductless Heat Pumps

(8) Smart thermostats

F4. Do you use any of the following Energy Trust marketing tools?

1. Incentive booklet
2. Website listing
3. Other tools? Please specify

F5. Have these tools helped you reach more customers? If so how?

F6. Do you have any suggestions for how these tools could be improved?

F7. Do you read the Insider blog or monthly Insider email newsletter?

1. If Yes, Do the Insider blog and email newsletter meet your needs?
2. If Yes, What do you find useful about them?
3. If no, what would make them more useful to you?

F8. Have you used any Business Development Funding from Energy Trust in the past year? If so what have been the results?

F9. How else could program staff improve their marketing activities to increase participation for your customers? **(OPEN ENDED)**

G. Communication and Reporting

G1. Does the Program Manager interact with you consistently?

1. Yes
2. No
99. Don't Know

G2. Have you:

1. Received timely responses to your questions?
2. Received clear responses to your questions?

- G3. Do you have any suggestions for how Energy Trust could improve communication with contractors like you? **(OPEN ENDED)**

H. Cross-Program Participation

H1. Do work with Energy Trust on any other programs besides Existing Homes? [Probe for installation of measures in Energy Trust's New Homes and Commercial/Multifamily program].

1. Yes (Specify and Continue)
2. No: Skip to Next Section
99. Don't Know Skip to Next Section

H2. If yes, is the trade ally support consistent across programs? Specifically, is the support you receive consistent across programs with respect to:

- | | 1 | 2 | 99 |
|--|-----|----|----|
| 1. Ease of incentive processing? | Yes | No | DK |
| 2. Access to call centers? | Yes | No | DK |
| 3. Availability and responsiveness of account managers? | Yes | No | DK |
| 4. [For any no answers ask] Do you have any suggestions for ways Energy Trust can this support? | | | |

H3. Is there anything else that would make the trade ally network more valuable to you and your firm?

I. Program Offerings

I1. **ASK for those that Participate in Savings Within Reach (See A2)? ALL OTHERS**

SKIP: Do you provide incentives for Savings Within Reach Customers?

1. Yes
2. No- **SKIP TO I6**
- Don't Know

12. If YES, What challenges do you have in qualifying customers for the Savings Within Reach Program (OPEN ENDED)
13. How could the program be made more clear to customers?
14. Do you refer your customers to other social service organizations or community action agencies?
1. Yes
 2. No
15. How could the Savings Within Reach Program improve? (OPEN ENDED)

ALL CONTINUE

16. Are there measures besides heat pumps that would work well as fixed price offerings?
17. What are additional opportunities to serve customers living in manufactured housing?

J. Program Satisfaction

- J1. On a scale of "1" to "5" where "1" means "Not at all Satisfied" and "5" means "Very Satisfied," how would you rate your satisfaction the Residential Program overall?

_____ Why do you say that?

- J2. Using the same scale, how you would rate your satisfaction with the Residential Staff Team?

_____ Why do you say that?

K. Areas for Program Improvement

- K1. Is there anything Energy Trust could do to further support your firm in expanding sales of qualifying equipment, products or services? (OPEN ENDED)
- K2. Do you have anything else to add?

Thank you for sharing your insights and taking the time to participate! Your input is greatly appreciated. To thank you for participating in this interview, the Energy Trust would like to send you a \$50.00 e-gift card.

Please confirm your email address: _____

Thanks again!

Appendix H: New Homes Construction Builders Interview Guide Process Evaluation of the Residential Program



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NEW CONSTRUCTION INTERVIEW GUIDE- BUILDERS Interview Guide

Research Objectives	Question Number
Participation	A1-A2
Demographics	B1-B4
Sales Trends	C1-C3
Program Operations	D1-D6
Impact of COVID and Other Disasters	E1-E5
Marketing and Outreach	F1-F3
Communication and Reporting	G1-G3
Program Satisfaction	H1-H2
Areas for Program Improvement	I1-I2

Respondent Name: _____

Organization: _____

Date: _____

Interviewer: _____

Hello, my name is [INTERVIEWER NAME] with Johnson Consulting Group and I’m calling on behalf of Energy Trust of Oregon. As part of our evaluation of the Residential New Construction Program from Energy Trust. We are talking with builders like you to learn about your working relationship with Energy Trust. Do you have about 20 minutes to answer some questions, or can we schedule time within the next week to talk? As a way to thank you for your time, we will send you a \$50.00 e-gift card.

[IF AGREE TO INTERVIEW CONTINUE, OTHERWISE THANK AND TERMINATE]

Thanks for taking the time to talk today. For note taking purposes, I’d like to record this interview. Any comments you make will be kept confidential and will not be attributed to you directly in our report.

A. Builder Participation

A1. According to our records, your organization participated in Energy Trust’s New Construction Program. Is that correct?

- 1. Yes
- 2. No **THANK AND TERMINATE**
- 3. 99. Don’t Know

A2. How many years has your organization been working with Energy Trust? (Your best estimate is fine.)

_____ Number of years.

B. Demographics

B1. What is your current title?

1. Owner
2. Manager
3. Salesperson
4. Office Manager/Administrative Support
5. Other (please specify)

B2. How many people work at your firm? _____ number of employees.

B3. How many offices/locations do you have? _____ number of locations

B4. Is your firm a? (MARK ALL THAT APPLY)

1. Woman-Owned Firm
2. Minority-Owned Firm
3. Veteran-Owned Firm
4. Other
5. None of the Above
99. Don't Know

B4A. IF YES: Is your firm (Mark all that apply)

1. Self-certified
2. Certified on COBID
3. Certified through another program (Specify_____)
99. Don't know

C. Sales Trends

C1. What types of New Homes do you build? **(Mark All That Apply)**

1. Production Homes
2. Custom Homes
3. Other (Specify _____)

C2. When you consider all of the homes you built last year, what percentage are built in (Ask all):

- | | | |
|--------------------------|-----------|--------|
| 1. in Oregon? 1. ___% | 2. None | 99. DK |
| 2. in Washington? 1. ___ | % 2. None | 99. DK |

C3. Approximately what percentage of new homes **in 2020** qualified for a rebate/incentive from Energy Trust?

_____ % None 99. Don't Know

D. Program Operations

D1. Based on your experience with the Energy Trust Program in the past year, how has the **New Home Construction** performed relative to your expectations? Why do you say that **(OPEN ENDED)**

D2. Do you primarily submit data to Energy Trust using:

1. Paper Forms
2. Online Forms
3. Both
99. Don't Know

D3. Have your payments been delayed the past year?

1. Yes—go to D4
2. No
- Don't Know

D4. If yes, About how many months have these payments been delayed?

_____ # of Months

D5. Did you receive electronic ACH payments from Energy Trust?

1. Yes
2. No

Don't Know

D6. Do you have any suggestions to improve the application submittal process?

E. Impact of COVID and Other Natural Disasters

E1. What challenges have you encountered in the last two years? How has COVID-19 and natural disasters impacted your business? (**OPEN ENDED**)

E2. How have these disasters affected the availability of qualifying equipment?

E3. What types of steps has your organization taken to lessen these impacts?

E4. How did the Residential Program staff support your organization during these set-backs?

E5. How has the wildfires affected your business operations, if at all (**OPEN ENDED**)?

F. Marketing and Outreach

F1. How do you promote your products and services to customers? (**Mark All That Apply**):

1. Websites
2. Print Ads
3. Online Ads
4. Media-Radio/TV
5. Social Media
6. Word-of-Mouth
7. Others (Specify_____)

F2. Of all of those activities, which have been the most effective in generating leads for your business?

1. Websites
2. Print Ads
3. Online Ads
4. Media-Radio/TV
5. Social Media
6. Word-of-Mouth
7. Others (Specify_____)

F3. How else could program staff improve their marketing activities to increase participation for your customers? (**OPEN ENDED**)

G. Communication and Reporting

G1. Does the **Residential Program** Manager interact with you consistently?

1. Yes
2. No
99. Don't Know

G2. Have you:

1. Received timely responses to your questions?
2. Received clear responses to your questions?

G3. Do you have any suggestions for how Energy Trust could improve communication with builders like you? (**OPEN ENDED**)

H. Program Satisfaction

H1. On a scale of “1” to “5” where “1” means “Not at all Satisfied” and “5” means “Very Satisfied,” how would you rate your satisfaction the **New Construction Program Overall?**

_____ Why do you say that?

H2. Using the same scale, how you would rate your satisfaction with the Residential Staff Team?

_____ Why do you say that?

I. Areas for Program Improvement

- I1. Is there anything Energy Trust could do to further support your firm? (**OPEN ENDED**)
- I2. Do you have anything else to add?

Thank you for sharing your insights and taking the time to participate! Your input is greatly appreciated. To thank you for participating in this interview, the Energy Trust would like to send you a \$50.00 e-gift card.

Please confirm your email address: _____

Thanks again!

Appendix I: New Construction Verifiers Interview Guide Process Evaluation of the Residential Program



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May 20, 2022

New Construction Interview Guide- VERIFIERS Interview Guide

Research Objectives	Question Number
Participation	A1-A2
Demographics	B1-B4
Sales Trends	C1-C2
Program Operations	D1-D6
Impact of COVID and Other Disasters	E1-E5
Marketing and Outreach	F1-F3
Communication and Reporting	G1-G3
Program Satisfaction	H1-H2
Areas for Program Improvement	I1-I2

Respondent Name: _____

Organization: _____

Date: _____

Interviewer: _____

Hello, my name is [INTERVIEWER NAME] with Johnson Consulting Group and I'm calling on behalf of Energy Trust of Oregon. As part of our evaluation of the Residential New Construction Program from Energy Trust. We are talking with verifiers like you to learn about your working relationship with Energy Trust. Do you have about 20 minutes to answer some questions, or can we schedule time within the next week to talk? As a way to thank you for your time, we will send you a \$50.00 e-gift card.

[IF AGREE TO INTERVIEW CONTINUE, OTHERWISE THANK AND TERMINATE]

Thanks for taking the time to talk today. For note taking purposes, I'd like to record this interview. Any comments you make will be kept confidential and will not be attributed to you directly in our report.

A. Builder Participation

A1. According to our records, your organization is a Verifier for Energy Trust's New Construction Program.

Is that correct?

1. Yes
2. No
3. 99. Don't Know

THANK AND TERMINATE

A2. How many years has your organization been working with Energy Trust? (Your best estimate is fine.)

_____ Number of years.

B. Demographics

B1. What is your current title?

1. Owner
2. Manager
3. Salesperson
4. Office Manager/Administrative Support
5. Other (please specify)

B2. How many people work at your firm? _____ number of employees.

B3. How many offices/locations do you have? _____ number of locations

B4. Is your firm a? (MARK ALL THAT APPLY)

1. Woman-Owned Firm
2. Minority-Owned Firm
3. Veteran-Owned Firm
4. Other
5. None of the Above
99. Don't Know

B4A. IF YES: Is your firm (Mark all that apply)

1. Self-certified
2. Certified on COBID
3. Certified through another program (Specify_____)
99. Don't know

C. Sales Trends

C1. When you consider all of the homes you VERIFIED in 2020, what percentage are built in (Ask all):

1. in Oregon? 1. ___% 2. None 99. DK

2. in Washington? 1. ___ % 2. None 99. DK

C2. Approximately what percentage of new homes you VERIFIED **in 2020** qualified for a rebate/incentive from Energy Trust?

_____ % None 99. Don't Know

D. Program Operations

D1. Based on your experience with the Energy Trust Program in the past year, how has the **New Home Construction** performed relative to your expectations? Why do you say that (**OPEN ENDED**)

D2. Do you primarily submit data to Energy Trust using:

1. Paper Forms

2. Online Forms

3. Both

99. Don't Know

D3. Have your payments been delayed the past year?

1. Yes—go to D4

2. No

Don't Know

D4. If yes, About how many months have these payments been delayed?

_____ # of Months

D5. Did you receive electronic ACH payments from Energy Trust?

1. Yes

2. No

3. Don't Know

D6. Do you have any suggestions to improve the application submittal process?

E. Impact of COVID and Other Natural Disasters

- E1.** What challenges have you encountered in the last two years? How has COVID-19 and natural disasters impacted your business? **(OPEN ENDED)**
- E2. How have these disasters affected the availability of qualifying equipment?
- E3. What types of steps has your organization taken to lessen these impacts?
- E4. How did the Residential Program staff support your organization during these set-backs?
- E5. How has the wildfires affected your business operations, if at all **(OPEN ENDED)?**

F. Marketing and Outreach

F1. How do you promote your products and services to customers? **(Mark All That Apply):**

1. Websites
2. Print Ads
3. Online Ads
4. Media-Radio/TV
5. Social Media
6. Word-of-Mouth
7. Others (Specify_____)

F2. Of all of those activities, which have been the most effective in generating leads for your business?

1. Websites
2. Print Ads
3. Online Ads
4. Media-Radio/TV
5. Social Media
6. Word-of-Mouth
7. Others (Specify_____)

F3. How else could program staff improve their marketing activities to increase participation for your customers? **(OPEN ENDED)**

G. Communication and Reporting

G1. Does the **Residential Program** Manager interact with you consistently?

1. Yes
2. No
99. Don't Know

G2. Have you:

1. Received timely responses to your questions?
2. Received clear responses to your questions?

G3. Do you have any suggestions for how Energy Trust could improve communication with VERIFIERS like you? *Probe on additional support, training, resources needed.* **(OPEN ENDED)**

H. Program Satisfaction

H1. On a scale of "1" to "5" where "1" means "Not at all Satisfied" and "5" means "Very Satisfied," how would you rate your satisfaction the **New Construction Program** Overall?

_____ Why do you say that?

H2. Using the same scale, how you would rate your satisfaction with the Residential Staff Team?

_____ Why do you say that?

I. Areas for Program Improvement

I1. Is there anything Energy Trust could do to further support your organization? **(OPEN ENDED)**

I2. Do you have anything else to add?

Thank you for sharing your insights and taking the time to participate! Your input is greatly appreciated. To thank you for participating in this interview, the Energy Trust would like to send you a \$50.00 e-gift card.

Please confirm your email address:_____

Thanks again!

Appendix J: Distributor Interview Guide Process Evaluation of the Residential Program



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May 20, 2022

Distributor Interview Guide – FINAL

Research Objectives	Question Number
Distributor Participation	A1-A2
Roles and Responsibilities	B1-B2
Distributor Demographics	C1-C3
Distributor Sales Trends	D1-D7
Program Operations	E1-E5
Impact of COVID and Other Natural Disasters	F1-F4
Energy Trust Influence	G1-G9
Other Qualifying Equipment	H1-H2
Marketing and Outreach	I1-I5
Communication and Reporting	J1-J4
Program Satisfaction	K1-K2
Areas for Program Improvement	L1-L2

Respondent Name: _____

Organization: _____

Date: _____

Interviewer: _____

Hello, my name is [INTERVIEWER NAME] with Johnson Consulting Group and I'm calling on behalf of Energy Trust of Oregon. As part of our evaluation of the Residential Program, we are talking with distributors like you to learn about your working relationship with Energy Trust. Do you have 15-20 minutes to answer some questions, or can we schedule time within the next week to talk?

[IF AGREE TO INTERVIEW CONTINUE, OTHERWISE THANK AND TERMINATE]

Thanks for taking the time to talk today. For note taking purposes, I'd like to record this interview. Any comments you make will be kept confidential and will not be attributed to you directly in our report.

A. Distributor Participation

A1. According to our records, your business participates in the Energy Trust Residential Program?

1. Yes
2. No- **Ask A2: If NONE: THANK AND TERMINATE**
3. Not Sure
4. Don't know- **Go to A2**

A2. How many years has your organization been working with Energy Trust? (Your best estimate is fine.)

_____ Number of years.

B. Roles and Responsibilities

B1. What is your current title?

1. Owner
2. Manager
3. Salesperson
4. Other (please specify)

B2. How long have you been in this position?

C. Distributor Demographics

C1. Is your firm a? **(Mark All That Apply)**

1. Woman-Owned Firm
2. Minority-Owned Firm
3. Veteran-Owned Firm
4. Other
5. None of the Above
99. Don't Know

IF YES: Is your firm **(Mark all that apply)**

1. Self-certified
2. Certified on COBID
3. Certified through another program (Specify_____)
99. Don't know

C2. How many people work at your firm? _____ number of employees.

C3. How many offices/locations do you have? _____ number of locations.

D. Distributor Sales Trends

D1. Who are your primary customers?

1. Residential Contractors
2. Commercial Contractors
3. Building Owners
4. Other (Specify_____)

D2. What products does your company distribute that qualify for the Energy Trust of Oregon program? (Choose all that apply)

1. Water Heaters_____
2. Fireplace Ignitions_____

D3. Based on annual revenues (**2020**), what percentage of your work is done for the?

- | | | | |
|-----------------------|---|------|----------------|
| 1. Residential Sector | % | None | 99. Don't Know |
| 2. Commercial Sector | % | None | 99. Don't Know |

D4. When you consider all of the products your firm sells in a year, what percentage are sold (Ask all):

- | | | | |
|-----------------------------|---------|---------|--------|
| 1. in Oregon? | 1. ___% | 2. None | 3. DK |
| 2. How about in Washington? | 1. ___% | 2. None | 99. DK |

D5. Approximately what percentage of your total sales of products **in 2020** qualified for a rebate/incentive from Energy Trust?

_____ % None 99. Don't Know

D6. For sales of equipment that **are NOT ELIGIBLE**, why are your customers **not buying** eligible equipment (**Open Ended: Mark all that apply**)

1. Requested equipment is not eligible- does not meet energy efficiency requirements
2. Customer doesn't qualify for installation (not homeowner)
3. Cost is too high
4. Contractor is not interested
5. Eligible equipment is not available
6. Other (Specify)

D7. For sales of equipment that are NOT ELIGIBLE, why are customers **not installing** eligible equipment (**Open Ended: Mark all that apply**)

1. Requested equipment is not eligible- does not meet energy efficiency requirements
2. Customer doesn't qualify for installation (not homeowner)
3. Cost is too high
4. Customer is not interested
5. Eligible equipment is not available

6. Other (Specify)

E. Program Operations

E1. How is the program performing relative to your expectations? Why do you say that?

E2. How can program staff improve processes (**Probe for each**)

1. Sales data reporting

2. Incentive processing

3. Marketing Efforts such as:

(1) Sales promotions

(2) Communications for program changes or promotions

E3. Please describe how you generate and submit data to Energy Trust?

E4. How well are these processes working for you?

E5. Do you have any suggestions to improve the reporting process?

F. Impact of COVID and Other Natural Disasters

F1. What challenges have you encountered in the last two years? How has COVID-19 and natural disasters impacted your business?

F2. How have these disasters affected the availability of qualifying equipment?

F3. What types of steps has your organization taken to lessen these impacts?

F4. How did the Residential Program staff support your organization during these setbacks?

G. Energy Trust Influence

G1. Since you started participating in the Residential Program, has your firm changed the way you promote, stock, and sell qualifying equipment?

1. Yes

2. No

99. DK

[ASK IF YES] What changed and why? [Probe for changes in stocking, promotion, and communication with contractors]

G2. Did the pandemic change the way your firm promote, stock, and sell qualifying equipment?

1. Yes
2. No
3. DK

[ASK IF YES] What changed and why? [Probe for changes in stocking, promotion, and communication with contractors]

G3. [ASK IF YES] Were any of these changes influenced by your work with Energy Trust? Please explain.

G4. How often do you suggest equipment that qualifies for Energy Trust incentives to contractors that did not specify such equipment?

1. Always
2. Most of the time
3. Sometimes
4. Never
5. DK

G5. How often has your company collaborated with Energy Trust to host “lunch and learns” or other trainings with contractors?

G6. Do you suggest equipment that qualifies for Energy Trust incentives to contractors that did not specify such equipment?

1. Yes
2. No
3. Other (please specify) _____
99. Don't Know

G7. How often has your company collaborated with Energy Trust to host “lunch and learns” or other trainings with contractors? If so, please describe the content of these events.

1. Have these events been effective in encouraging contractors to specify qualifying equipment? Please explain.
2. If not ask, Why haven’t you hosted a lunch and learn?

G8. Is there another format, alternative to “lunch and learns,” that might be more effective in educating contractors? If so, what would that look like? [Probe for specifics]

G9. Would it be effective to bring in manufacturers or program staff to speak to installers directly about efficient equipment?

H. Other Qualifying Equipment

H1. Do you distribute other energy efficient equipment that you believe should be incentivized?

1. Yes
2. No
3. Other (please specify) _____
4. Don’t Know

H2. If Yes, please what equipment?

I. Marketing and Outreach

I1. How have you marketed this program to your customers?

I2. Have you used your own marketing and promotion materials to support Energy Trust? If so, how?

I3. How do you use Energy Trust marketing materials to promote Energy Trust incentives?

I4. Have you participated in one of Energy Trust’s limited-time sales promotions? If so, what was your experience?

- I5. How could program staff improve their marketing activities or tactics to better increase participation for your customers?

J. Communication and Reporting

- J1. How frequently do you communicate with the Energy Trust Program PMC? Is this sufficient?
- J2. Have you:
1. Received timely responses to your questions?
 2. Received clear responses to your questions?
- J3. Are the right people included in the communications activities? Should anyone else be added?
- J4. Do you have any suggestions for how Energy Trust could improve communication with partners like you?

K. Program Satisfaction

- K1. On a scale of "1" to "5" where "1" means "Not at all Satisfied" and "5" means "Very Satisfied," how would you rate your satisfaction with the Energy Trust Program overall?

_____ Why do you say that?

- K2. Using the same scale, how you would rate your satisfaction with the Energy Trust Team?

_____ Why do you say that?

L. Areas for Program Improvement/Enhancement

- L1. How else could Energy Trust improve program processes?
- L2. Do you have anything else to add?

Thank you for sharing your insights and taking the time to participate! Your input is greatly appreciated.

Appendix K: Community Partners Interview Guide Process Evaluation of the Residential Program



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May 20, 2022

Community Organization Interview Guide- Community Partner Funding Program

Research Objectives	Related Questions
Roles and Responsibilities	A1-A3
Program Enrollment	B1-B2
Program Operations	C1-C3
Communication	D1-Error! Reference source not found.
Data Tracking and Reporting	E1-E3
Community Engagement	F1-F8
Assessing Impacts of COVID and Other Natural Disasters	G1-G5
Program Satisfaction	H1-H4
Areas for Program Improvement	I1-I2

General Instructions

- Interviewer instructions are in green **[LIKE THIS]**
- Items that should not be read by the interviewer are in parentheses like this ().

A. Introduction

Hello. I'm _____ from Johnson Consulting Group. I'd like to talk with you today about your organization's involvement and collaboration with Energy Trust of Oregon. Our main objective of this interview is to assess the effectiveness and impact of Energy Trust in your community and identify additional areas for program improvement. Your answers will be anonymized and will be used to make program improvements.

As a way to thank you for your participation today, Energy Trust would like to send your organization an \$50.00 electronic gift card.

When would be a convenient time to talk? _____

Respondent Name: _____

Organization: _____

Date: _____

Interviewer: _____

Thank you for participating in this interview.

A. Respondent Roles and Responsibilities

I'd like to begin with learning a little bit more about your background.

- A1. What is your current role at your organization?
- A2. What types of services does your organization provide?
- A3. Please describe the types of communities that your organization serves. (Probe for location, number of residents, communities of color, seniors, others).

B. Program Enrollment

B1. Please describe how your organization became involved with the Community Partner Funding Program with Energy Trust?

- (1) How did you learn about the program?
- (2) When did you sign up for the program?
- (3) What types of support did you receive from Energy Trust? Was this sufficient?
- (4) Were the program requirements clearly explained to your staff? If not, what needed to be clarified?
- (5) Were there any challenges that you had to work through in coordinating these activities? How were these issues resolved?

B2. How would you describe the enrollment process overall?

C. Program Operations

C1. How has the collaboration with Energy Trust been working? Does this relationship align with your expectations?

C2. What parts of the program are going well?

C3. What areas are still challenging? Probe on the following:

- (1) Household eligibility requirements (i.e., type of home, primary heating source)
- (2) Resident didn't meet eligibility requirements (due to location, age, etc.)
- (3) Need for Remediation or energy enabling improvements prior to weatherization.

1. Not able to have the supplementary income or finance options to cover the improvements.
2. Not the actual lease or deed owner of the property.
3. Not able to get landlord approval.

D. Communications

D1. How often do you speak with the Energy Trust Residential Program staff? Is this sufficient?

- (1) How often would you like to meet with the staff?
- (2) Are the right individuals included in these communication activities?

D2. How responsive are the Residential Program staff to your questions?

D3. Do you have unresolved questions around the Community Partner Funding program?

E. Data Tracking and Reporting

E1. What types of reports do you provide to the Energy Trust?

- (1) How do you submit reports to Energy Trust?
- (2) How frequently do you provide these reports?
- (3) Do you have any challenges providing these reports?

E2. What types of information does Energy Trust share with you about the program?

- (1) Are there other types of information that you would like to receive? If so, what?

E3. How often do you discuss the results with Energy Trust, in terms of participation number, measure installations, or other key program metrics?

F. Community Engagement

F1. How have you promoted this opportunity within your communities?

F2. What types of feedback have you received from your community members?

F3. About how many more people have you been able to serve because of this new initiative?

F4. Did you engage the community in any other Energy Trust activities such as:

- (1) LED bulb promotion through food banks

- (2) Increased weatherization funding for electric/gas measures
 - (3) Others?
- F5. Has the number of minority-owned contractors increased because of these efforts? (Probe for race, ethnicity, gender)
- F6. Has the amount work for the minority contractors increase because of this program?
- F7. Has participating in the CPF program provided your organization with additional opportunities for other funding sources?
- F8. What other activities should Energy Trust do to expand this initiative to reach other households in your community?

G. Assessing the Impacts of COVID and Natural Disasters

- G1. How did the COVID pandemic affect your ability to serve your customers?
- G2. Were communities in your area affected by the wildfires? If so, how did that impact your ability to serve your clients?
- G3. What types of activities has your organization engaged as a result of these events?
- G4. Did the support from Energy Trust help to lessen these impacts?
- G5. What other ways can Energy Trust or the Community Partner Funding program help your community recover from these events?

H. Program Satisfaction

I'd like to get your overall assessment of Community Partner Funding program.

- H1. On a scale of "1" to "5" where "1" means "Not at all Satisfied," and "5" means "Very Satisfied," how satisfied are you with the Community Partner Funding program?
- H2. What aspects of the program did you like best?
- H3. What aspects of the do you like least?
- H4. Would you recommend this program to other community organizations in your area? Why or why not?

I. Areas for Program Improvement

- I1. Are there any other ways that the Energy Trust could improve this program to your organization?
- I2. Do you have anything else to add?

Thank you so much for your time! It has been a pleasure speaking with you!

Appendix L: Contractor Demographics Process Evaluation of the Residential Program



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Contractor Demographics

Customer Interest

To explore the customer interest in types of products, the trade allies were asked to estimate the number of their own customers interested in cooling equipment. An average of 57.71% of customers were interested in cooling equipment. Contractors also estimated the number of customers interested in Central Air Conditioners, Heat Pumps and Ductless Heat Pumps specifically.

Table 1: Customers Interested in Cooling Equipment

Percent of Customers	Percentage
50% or Less	36%
50 to 75%	43%
More than 75%	21%
Average	57.71%

Table 2: Customers Interested in Equipment

Customer Interest	Average
Cooling Equipment	57.71%
Central Air Conditioners	45.53%
Heat Pumps	43.33%
Ductless Heat Pumps	40.33%

Nearly all customers are single family homeowners (85%), although many contractors indicated that they did work for builders and manufactured homes as well. The interview also asked contractors to estimate the amount of work the company does in each sector (Residential, Multifamily and Commercial). Most of the work 83% is done in the Residential sector. Twenty percent is done in the multifamily sector, however many contractors indicated that they only had so many jobs for multifamily, but they were “big ticket items”, meaning that they were very large jobs even if there were not as many of them.

Types of Products Sold and Eligible Equipment

Types of products sold

The products spanned a good mix of measures-LEDs, water heaters, and others. Most of the interviewees indicated a single measure offer which may indicated an opportunity to expand the mix to ore stores.

The list provided by Energy Trust included very few retailers with stores. Without knowing what stores are participating, it's difficult for Energy Trust to monitor process and conduct QA/QC.

Eligible Equipment

All trade allies interviewed do work in Oregon, 28% also do work in Washington. Based off the total sales from 2020, contractors were asked to estimate what percentage of the equipment sold they believe qualified for a rebate from Energy Trust. On average contractors believe that 39% of the equipment they install qualifies for a rebate from Energy Trust.

Trade Ally Contractor Demographics

Program Participation

The Johnson Consulting team conducted 36 Trade Ally interviews. As part of the interview Trade Allies were asked to identify which Energy Trust programs they had participated in, many have participated in more than one program with Energy Trust. The Home Retrofit program is the program most of the Trade Allies have participated in. Half of all Trade Allies interviewed are owners, while 17% are office managers or provide administrative support, 20% are store managers and 9% are salespersons. Two trade allies are from Women Owned businesses and one is a Veteran Owned business.

Figure 1: Trade Ally Program Participation

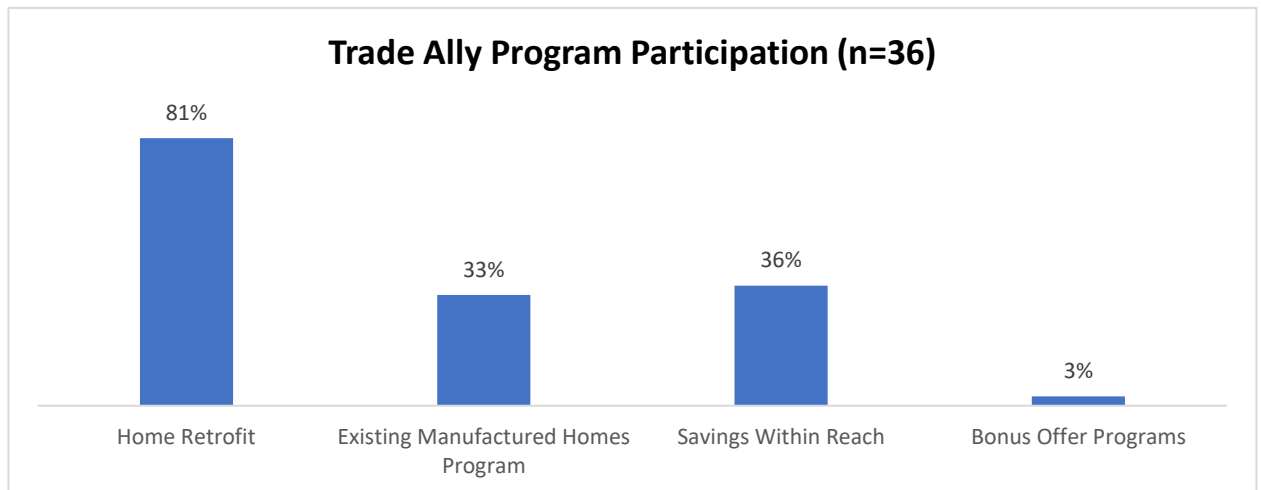


Table 3: Contractor Title

Contractor Title	Total	Percentage
Owner	19	54%
Manager	7	20%
Salesperson	3	9%
Office Manager/Administrative Support	6	17%
Total	35	100%

Table 4: Number of Employees

Number of employees	Total	Percentage
10 or Under	16	46%
11 to 20	8	23%
25 to 50	5	14%
60 to 100	4	11%
100+	1	3%

Sales Trends

The following section shows the breakdown of electric, gas, building shell and plumbing equipment the contractors install as part of their business. Almost half (48%) of trade allies interviewed, install some type of insulation, while a quarter (26%) install electric measures. Fourteen percent install gas measures, while 11% install plumbing, such as water heaters.

Figure 2: Types of Products Installed by Trade Allies

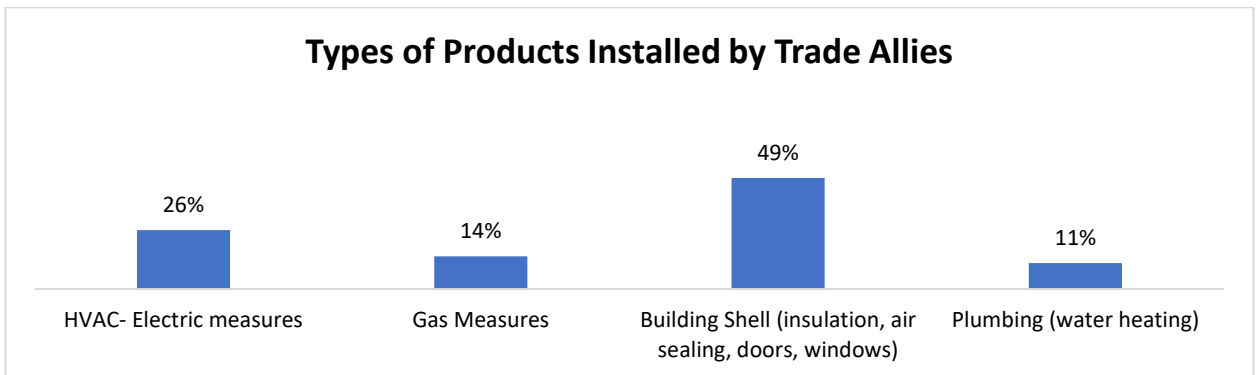
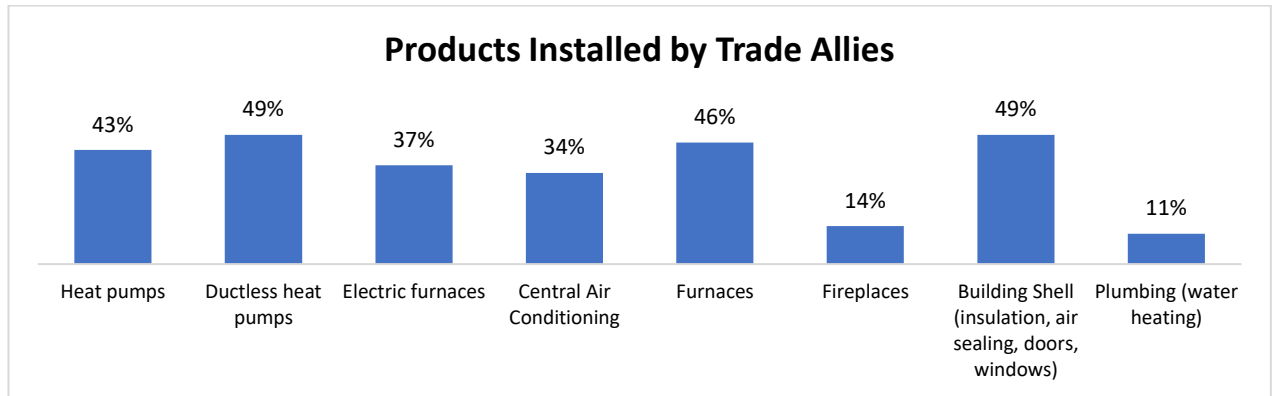


Figure 3: Products Installed by Trade Allies



Sales Trends- MFG Homes

Participants reported ET participants only accounted for 50%, 45%, and 35% of homes sold. The main reason cited was location as many home buyers did not live in an area covered by the ET programs. All three mentioned that more utilities should be participating in this program. Other reasons were the severe fires that destroyed homes and many people were underinsured or had no insurance and couldn't afford energy efficient upgrades.

All three respondents indicated that most of their sales are to homeowners with one indicating sales to park owners and landlords.

Table 5: Comparison of Trade Ally Contractor jobs by Sector

Work Done	Residential Sector	Multifamily Sector	Commercial Sector
Average %	83%	20%	19%

Table 6: Percentage of Qualifying Equipment for a Rebate

Percentage of Qualifying Equipment	Percentage
10% or Less	20%
11 to 25%	23%
30 to 49%	23%
50-75%	13%
75%+	20%
Average	39%

The reasons for the equipment ineligibility were varied depending on the type of products. Contractors that installed windows indicated that many window replacements are “custom jobs” and not eligible. Some contractors work on the

Idaho border, where the power company is Idaho Power. Contractors that install hot water heaters indicated that many customers consider it an “emergency situation” and are not willing to spend the extra money for a more energy efficient hot water heater, when they need one now or will take whatever is available. Other contractors felt that there just weren’t that many incentives available for the products they install.

Types Services Provided by the Organizations Interviewed

- Energy Efficiency Assessments and upgrades
- Foreclosure prevention education
- Water leakage Mitigation & Replacement
- First-time home buyers’ education and savings program
- Retro fits
- Solar & Geothermal instillations
- Provide Small Business Support w/ energy saving initiatives
- Lead Poisoning Prevention
- Health & Safety Initiatives
- Food Insecurity